February 15, 2013
2:00-5:00
ADM 204

I. Roll
( ) Dave Fitzgerald (CBPP)  ( ) Ira Ortega (COE)  ( ) Christina Stuive (SA)  ( ) Adjunct vacancy
( ) Paola Banchero (CAS)  ( ) Jeffrey Callahan (CTC)  ( ) Francisco Miranda (FS CAS)  ( ) USUAA vacancy
( ) Mari Ippolitio (CAS)  ( ) Upal Dutta (SOE)  ( ) Alberta Harder (FSAL)  ( ) Ex-Officio Members:
( ) Barbara Harville (CAS)  ( ) Michael Hawfield (KPC)  ( ) Soren Orley (FSAL)  ( ) Susan Kalina
( ) Len Smiley (CAS)  ( ) Kevin Keating (LIB)  ( ) FS at large vacancy  ( ) Lora Volden
( ) Lynn Senette (COH)  ( ) Joan O’Leary (Mat-su)  ( ) Kathryn Hollis Buchanan (Kodiak)  ( ) S&P
( ) Eileen Weatherby (COH)  ( ) Vacant (Adjunct)

II. Approval of the Agenda (pg.1-2)

III. Approval of Meeting Summary (pg. 3-4)

IV. Administrative Report
   A. Vice Provost for Undergraduate Academic Affairs Susan Kalina

B. University Registrar Lora Volden

V. Chair’s Report
   A. UAB Chair- Dave Fitzgerald

   B. GERC

VI. Program/Course Action Request- Second Readings
Chg  BA A151  Introduction to Business (3)(3+0)(pg. 5-11)
Chg  ENGL A111  Introduction to Composition (3)(3+0)(pg. 12-27)

VII. Program/Course Action Request- First Readings
Chg  Minor, Athletic Training (pg. 28)
Chg  Bachelor of Science, Physical Education (pg. 29-49)
Chg  BA A166  Small Business Management (3)(3+0)(pg. 50-54)
Chg  BA A480  Social Media Marketing
(Staked with BA A680) (3)(3+0)(pg. 55-65)
Chg  ACCT A495  Advanced Accounting Internship (3)(0+9)(pg. 66-70)
Chg  CSCE A201  Computer Programming I (4)(3+2)(pg. 71-75)
Chg  CSCE A202  Object-Oriented Programming (3)(3+0)(pg. 76-81)
Chg  CSCE A211  Computer Programming II (4)(3+2)(pg. 82-86)
Chg  CSCE A241  Computer Hardware Concepts
(Cross Listed with EE A241) (4)(3+3)(pg. 87-92)
Chg  EE A241  Computer Hardware Concepts
(Cross Listed with CSCE A241) (4)(3+3)(pg. 93-98)
Chg  CSCE A248  Computer Organization and Assembly Language Programming (3)(3+0)(pg. 99-105)
Chg  CSCE A302  Object-Oriented Design Patterns (3)(3+0)(pg. 106-109)
Add  CSCE A305  Android Programming (3)(3+0)(pg. 110-113)
Chg  CSCE A311  Data Structures and Algorithms (3)(3+0)(pg. 114-119)
Chg  CSCE A331  Programming Language Concepts (3)(3+0)(pg. 120-125)
Chg  CSCE A342  Digital Circuits Design (3)(3+0)(pg. 126-130)

VIII. Old Business
A. Curriculum Review Process

IX. New Business
A. Draft Academic Program Suspension and Deletion Policies and Cover Memo Template (pg. 131-138)

X. Informational Items and Adjournment
Undergraduate Academic Board
Summary

February 8, 2013
2:00-5:00
ADM 204

I. Roll
(x) Dave Fitzgerald (CBPP) (x) Ira Ortega (COE) (x) Christina Stuive (SA)  ( ) Adjunct vacancy
(x) Paola Banchero (CAS) (e ) Jeffrey Callahan (CTC) (x) Francisco Miranda (FS CAS) ( ) USUAA vacancy
(x) Mari Ippolitio (CAS) (x) Upal Dutta (SOE) (x) Alberta Harder (FSAL) Ex-Officio Members:
(x) Barbara Harville (CAS) (x) Michael Hawfield (KPC) (x) Soren Orley (FSAL)  (x) Susan Kalina
( ) Len Smiley (CAS) (x) Kevin Keating (LIB) ( ) FS at large vacancy  (x) Susan Orley
(x) Lynn Senette (COH) (x) Joan O’Leary (Mat-su) (x) Kathrynn Hollis Buchanan (Kodiak) (x) S&P
(x) Eileen Weatherby (COH) ( ) Vacant (Adjunct)

II. Approval of the Agenda (pg.1-2)
Change NS A333A-C to NS A334A-C
Approved as amended

III. Approval of Meeting Summary (pg. 3-4)
Approved

IV. Administrative Report
A. Vice Provost for Undergraduate Academic Affairs Susan Kalina
Course fee requests are due March 8th
BS Health Science was approved by NWCCU
A meeting was held yesterday with the Arlene Schmuland, Dave Fitzgerald, Lora Volden, Susan Kalina, Megan Carlson, and Kimberly Swiantek to discuss adding a location to a program

B. University Registrar Lora Volden
Responses to the purge list are due to Governance Monday, February 11th

V. Chair’s Report
A. UAB Chair- Dave Fitzgerald
By-laws state that it is ‘recommended’ to have a joint meeting with GAB, but it is not mandatory

B. GERC
Did not meet today

VI. Program/Course Action Request- Second Readings
Add  NS A333 Ethics and the Practice of Nursing (3 cr)(3+0)(pg. 5-9)
Add  NS A333A Ethics and the Practice of Nursing: Personal and Professional Values
(1 cr)(1+0)(pg. 10-13)
Add  NS A333B Ethics and the Practice of Nursing: Communication (1 cr)(1+0)(pg. 14-18)
Add  NS A333C Ethics and the Practice of Nursing: Case Studies (1 cr)(1+0)(pg. 19-23)
Chg  Bachelor of Science, Nursing Science (pg. 24-46)
Motion to postpone the vote on the Nursing curriculum until all affected parties can coordinate and resolve any issues between courses/departments.
Unanimously Approved

VII. Program/Course Action Request- First Readings
Chg  CIS A110 Computer Concepts in Business (3 cr)(3+0)(pg. 47-52)
Unanimously Approved

Chg  BA A151 Introduction to Business (3 cr)(3+0)(pg. 53-59)
Accepted for first reading, forward to GERC
Chg    BA A260    Marketing Practices (3 cr)(3+0)(pg. 60-65)
Waive first reading, approve for second

Chg    BA A264    Personal Selling (3 cr)(3+0)(pg. 66-70)
Waive first reading, approve for second

Chg    BA A295    Internship in Business Administration (3 cr)(0+9)(pg. 71-74)
Waive first reading, approve for second

Chg    ENGL A111    Introduction to Composition (3 cr)(3+0)(pg. 75-86)
Accepted for first reading, forward to GERC

VIII. Old Business

IX. New Business
A. Placement scores utilized for pre-requisite checking (pg. 87)
   Proposal should list box 16b. and not box 13a.
   Motion: UAB moves to accept the proposal set forward by the Office of the Registrar.
   Unanimously Approved

B. Curriculum Review Process
   Discussed the coordination process
   Discussed the review period (5 or 10 years) of how often courses should be revised

X. Informational Items and Adjournment
# Course Action Request

University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB CBPP</td>
<td>ADBP Division of Business Programs</td>
<td>BA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>A151</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
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</table>

6. Complete Course Title
Introduction to Business

Abbreviated Title for Transcript (30 character)

7. Type of Course
☐ Academic ☑ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action:
☐ Add ☑ Change ☐ Delete

If a change, mark appropriate boxes:
☐ Prefix ☑ Course Number ☐ Contact Hours ☐ Repeat Status
☐ Grading Basis ☐ Cross-Listed/Stacked ☐ Title ☐ Co-requisites
☐ Course Description ☐ Course Prerequisites ☐ Other Restrictions ☐ Registration Restrictions
☐ Credits ☐ Level ☐ College ☐ Major ☐ Other Update CCG (please specify)

9. Repeat Status No  # of Repeats Max Credits

10. Grading Basis
☑ A-F ☐ P/NP ☐ NG

11. Implementation Date  semester/year
From: Fall/2013 To: /9999

12. ☐ Cross Listed with ☐ Stacked with Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initiator Name (typed): Jeri Rubin  Initiator Signed Initials: _________  Date:________________

13b. Coordination Email  Date: 01/22/2013
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  Date: 01/22/2013

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☑ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Introduces students to the fundamentals of business. Explores strategies that allow companies to compete in today’s interactive, global marketplace. Covers each of the functional areas of business: management, marketing, finance, and accounting. Students gain some valuable critical-thinking, problem-solving, team-building, and communication skills required in modern business environments.

16a. Course Prerequisite(s) (list prefix and number) N/A
16b. Test Score(s) N/A
16c. Co-requisite(s) (concurrent enrollment required) N/A
16d. Other Restriction(s) N/A
☐ College ☐ Major ☐ Class ☐ Level
16e. Registration Restriction(s) (non-codable) N/A

17. ☑ Mark if course has fees Standard CBPP computer lab fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action
To update resources: textbook and bibliography

Initiator (faculty only)  Date
Jeri Rubin

Initiator (TYPE NAME)  Date

Approved Disapproved
☐ Dean/Director of School/College  Date

☐ Approved Disapproved
Department Chairperson  Date

☐ Approved Disapproved
Undergraduate/Graduate Academic  Date

☐ Approved Disapproved
Board Chairperson  Date

☐ Approved Disapproved
Provost or Designee  Date

Approved Disapproved
Curriculum Committee Chairperson  Date
13a. Impacted courses or programs BA A151

<table>
<thead>
<tr>
<th>Impacted program/course</th>
<th>Date of coordination</th>
<th>Chair/ Coordinator contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting, AAS</td>
<td>01/22/2013</td>
<td>C. Patrick Fort</td>
</tr>
<tr>
<td>General Business, AAS</td>
<td>01/22/2013</td>
<td>Steve Horn</td>
</tr>
<tr>
<td>Small Business Administration, AAS</td>
<td>01/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>Logistics and Supply Chain Operations, Undergraduate Certificate</td>
<td>01/22/2013</td>
<td>Darren Prokop</td>
</tr>
<tr>
<td>Logistics and Supply Chain Operations, AAS</td>
<td>01/22/2013</td>
<td>Darren Prokop</td>
</tr>
<tr>
<td>Bachelor of Social Work</td>
<td>01/22/2013</td>
<td>Cheryl Easley</td>
</tr>
<tr>
<td>Aviation Administration, AAS</td>
<td>01/22/2013</td>
<td>Rocky Capozzi</td>
</tr>
<tr>
<td>Aviation Technology, BS, Aviation Management Emphasis</td>
<td>01/22/2013</td>
<td>James Derry</td>
</tr>
<tr>
<td>Computer Systems Technology, AAS</td>
<td>01/22/2013</td>
<td>Kim Griffis</td>
</tr>
<tr>
<td>Physical Education, Health and Fitness Leadership, BS</td>
<td>01/22/2013</td>
<td>Sandra Carroll-Cobb</td>
</tr>
<tr>
<td>Physical Education, Outdoor Leadership and Administration, BS</td>
<td>01/22/2013</td>
<td>Sandra Carroll-Cobb</td>
</tr>
<tr>
<td>BA A260</td>
<td>01/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>BA A266</td>
<td>01/22/2013</td>
<td>Ed Forrest</td>
</tr>
<tr>
<td>PEP A453</td>
<td>01/22/2013</td>
<td>Sandra Carroll-Cobb</td>
</tr>
</tbody>
</table>
I. Date Initiated

February 11, 2013

II. Course Information

College/School: College of Business and Public Policy
Department: Business Administration
Program: 
- Associate of Applied Science, Accounting;
- Associate of Applied Science, General Business;
- Associate of Applied Science, Small Business Administration;
- Undergraduate Certificate, Logistics and Supply Chain Operations;
- Associate of Applied Science, Logistics and Supply Chain Operations;
- Bachelor of Social Work;
- Associate of Applied Science, Aviation Administration;
- Bachelor of Science, Aviation Technology, Aviation Management Emphasis;
- Associate of Applied Science, Computer Systems Technology;
- Bachelor of Science, Physical Education, Health and Fitness Leadership;
- Bachelor of Science, Physical Education, Outdoor Leadership and Administration

Course Title: Introduction to Business
Course Number: BA A151
Credits: 3
Contact Hours: 3 per week x 15 weeks = 45 hours
0 lab hours
6 hours outside of class per week x 15 weeks = 90 hours
Grading Basis: A-F

Course Description: Introduces students to the fundamentals of business. Explores strategies that allow companies to compete in today’s interactive, global marketplace. Covers each of the functional areas of business: management, marketing, finance, and accounting. Students gain some valuable critical-thinking, problem-solving, team-building, and communication skills required in modern business environments.

Course Prerequisites: N/A
Registration Restrictions: N/A
Fees: Standard CBPP lab fee
III. Course Activities
   A. Lectures and discussions
   B. In-class exercises
   C. Video cases
   D. Guest speakers

IV. Course Level Justification
   This is a 100-level course that introduces students to the field of business and helps them build basic business skills and vocabulary. Introduction to Business is a survey course that serves as a foundation for subsequent business courses.

V. Outline
   A. The Global Business Environment
      1. Economic systems and competition
         a. Impact of allocation of scarce resources on business
         b. Supply and demand as “the science of choice”
      2. Ethics and social responsibility
         a. Moral rights and duties between the firm and its stakeholders
         b. Ethical issues concerning relations between different companies
   B. Starting and Growing a Business
      1. Forms of business ownership
      2. Entrepreneurship
   C. Management
      1. Managing and leading human resources
      2. Managing organizations
      3. Empowerment, teamwork, and communication
      4. Production and operations management
      5. Labor management issues
   D. Marketing
      1. Customer-driven marketing
      2. Developing the marketing mix
      3. Marketing research
   E. Managing Technology and Information
      1. Using technology to manage information
      2. Understanding accounting and financial statements
   F. Managing Financial Resources
      1. Money and financial institutions
      2. Financial management and securities markets
VI. Suggested Text

VII. Bibliography


VIII. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructor will:</td>
</tr>
<tr>
<td>1. Introduce students to the field of business and distinguish between for-profit and not-for-profit organizations.</td>
</tr>
<tr>
<td>2. Introduce key topics relating to the complexity of relationships between institutions and human behavior: human resource management, leadership, teamwork, and motivation.</td>
</tr>
</tbody>
</table>
3. Explain the concepts of business ethics, social responsibility, and the terms under which ethical rights and duties exist between companies and society.

4. Distinguish between microeconomics and macroeconomics and explain the factors that drive demand and supply.

5. Explain the importance of international business and the main reasons for global trade.

6. Summarize the three basic forms of business ownership and their advantages and disadvantages.

7. Define the term entrepreneur and explain why people choose entrepreneurship.

8. Explain the importance of human resource management and the functions of human resource managers and unions.

9. Describe management skills, leadership, and strategic planning.

10. Discuss the importance of production and operations management.

11. Explain the marketing concept and the basic steps in developing a marketing strategy.

12. Explain the concept of the marketing mix: product, pricing, distribution, and promotional strategies.

13. Identify primary and secondary marketing research techniques to study consumer behavior and to identify market segments.

14. Identify the functions of accounting and its importance to the firm’s stakeholders and explain the functions of the three principle financial statements: income statement, balance sheet, and statement of cash flows.

15. Discuss how business manages technology and information to include social media.

16. Explain the responsibilities of a financial manager and describe some sources and uses of short-term and long-terms funds.

17. Describe the differences between the primary and secondary securities markets and discuss several types of securities.

**B. Student Learning Outcomes. Students will be able to:**

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe business ethics and why social responsibility and ethical performance are critical to business success</td>
<td>Quizzes, Tests</td>
</tr>
<tr>
<td>2. Distinguish between microeconomics and macroeconomics and explain the factors that drive demand and supply to include the</td>
<td>Quizzes, Tests, Team exercises</td>
</tr>
</tbody>
</table>
3. Demonstrate knowledge of the global marketplace and how different cultures conduct business to include how to reap the benefits of working in teams with people from different ethnic, lifestyle, and age groups

| Homework | Tests | Team exercises or cases |

4. Describe how businesses can be organized and explain entrepreneurial alternatives

| Quizzes | Tests | Homework |

5. Explain how today’s businesses require strong understanding of interpersonal, group, and cultural dynamics

| Quizzes | Tests | Cases |

6. Demonstrate understanding of management and leadership techniques and their impact on interpersonal relations and business performance

| Team exercises | Tests |

7. Define marketing and the elements of the marketing mix and identify aspects of marketing research used to determine how to developing marketing strategies

| Tests | Cases | Homework |

8. Explain the role of management information systems and the benefits and challenges of e-commerce

| Quizzes | Tests |

8. Explain the functions of accounting and finance and their value to the firm’s stakeholders

| Quizzes | Tests | Exercises or cases |

9. Demonstrate ability to integrating business concepts by using critical thinking skills

| Tests | Final exam | Exercises or cases |
**Course Action Request**  
**University of Alaska Anchorage**  
Proposal to Initiate, Add, Change, or Delete a Course

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<tbody>
<tr>
<td>AS CAS</td>
<td>AHUM Division of Humanities</td>
<td>ENGL</td>
</tr>
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<th>2. Course Prefix</th>
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<th>5b. Contact Hours (Lecture + Lab)</th>
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<tr>
<td>ENGL</td>
<td>A111</td>
<td>N/A</td>
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<td>(3+0)</td>
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</table>

**6. Complete Course Title**  
Introduction to Composition

**Abbreviated Title for Transcript (30 characters)**

**7. Type of Course**
- ☑ Academic  
- □ Preparatory/Development  
- □ Non-credit  
- □ CEU  
- □ Professional Development

**8. Type of Action:**
- □ Add  
- □ Change  
- □ Delete  

If a change, mark appropriate boxes:
- □ Prefix  
- □ Credits  
- ☑ Title  
- □ Grading Basis  
- □ Cross-Listed/Stacked  
- ☑ Course Description  
- □ Course Prerequisites  
- □ Test Score Prerequisites  
- □ Co-requisites  
- □ Registration Restrictions  
- ☑ College  
- Level  
- ☑ Major  

**9. Repeat Status No**
- # of Repeats: 0  
- Max Credits: 0

**10. Grading Basis**
- ☑ A-F  
- □ P/NP  
- □ NG

**11. Implementation Date**
- semester/year  
- From: Fall/2013  
- To: 9999/9999

**12. Cross Listed with**
- □ Stacked with  
- Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.  
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
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<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See attached coordination table.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Initiator Name (typed):** Jackie Cason  
**Initiator Signed Initials:** _________  
**Date:**________________

13b. Coordination Email  
**Date:** 12/12/12  
submitted to Faculty Listserv: ([uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu))

13c. Coordination with Library Liaison  
**Date:** 1/22/13

14. General Education Requirement  
**Mark appropriate box:**
- □ Oral Communication  
- ☑ Written Communication  
- □ Fine Arts  
- □ Social Sciences  
- □ Quantitative Skills  
- □ Natural Sciences  
- □ Humanities  
- □ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)

English A111 provides instruction in responding to academic and civic writing situations. Students learn rhetorical knowledge (e.g., how to write for a purpose and an audience, how to adopt an appropriate voice, tone, and level of formality); they engage in critical thinking, reading, and writing; they learn about processes and technologies available for producing texts; and they refine knowledge of academic conventions, including inquiry and research writing, documentation, and Standard Written English.

16a. Course Prerequisite(s) (list prefix and number or test code and score)

- [ENGL A109 with a minimum grade of C] OR [PRPE A108 with a minimum grade of C] OR [Accuplacer-Reading Comp with score of 080 and Accuplacer-Sentence Skills with score of 90] OR [Enhanced ACT English with score of 22] OR [ACT English with score of 22] OR [SAT Critical Reading Score with score of 530] OR [SAT Verbal Score with score of 530].

16b. Co-requisite(s) (concurrent enrollment required)

16c. Other Restriction(s)

- □ College  
- □ Major  
- □ Class  
- □ Level

16d. Registration Restriction(s) (non-codable)

17. ☑ Mark if course has fees

18. □ Mark if course is a selected topic course

19. Justification for Action

The course is being updated: title, course description, test score and course prerequisites, instructional goals and student learning outcomes, outline, suggested texts, bibliography.
<table>
<thead>
<tr>
<th>Role</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Initiator (faculty only)</td>
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<tr>
<td>Initiator (TYPE NAME)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Dean/Director of School/College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department Chair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate/Graduate Academic</td>
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<td></td>
<td></td>
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<tr>
<td>Board Chair</td>
<td></td>
<td></td>
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<tr>
<td>Provost or Designee</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>College/School Curriculum Committee Chair</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

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<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
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<tbody>
<tr>
<td>Admissions</td>
<td>54</td>
<td>12/10/12</td>
<td>Cecile Mitchell</td>
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<tr>
<td>AA and AAS Degrees</td>
<td>81</td>
<td>12/12/12</td>
<td>Faculty List</td>
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<tr>
<td>Associate of Arts</td>
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<tr>
<td>Bachelor of Liberal Studies</td>
<td>115</td>
<td>12/10/12</td>
<td>Sarah Gerken</td>
</tr>
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<td>Bachelor of Business Administration, Accounting</td>
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| 40. | Undergraduate Certificate, Petroleum Technology | 227 | 02/07/13 | Paula J.S. Martin  
Pjmartin2@uaa.alaska.edu |
| 41. | AAS, Process technology | 228 | 12/10/12 | Paula J.S. Martin |
| 42. | Undergraduate certificate Industrial safety | 232 | 12/10/12 | Angela Dirks |
| 43. | AAS Technology | 232 | 12/10/12 | Lorraine Stewart |
| 44. | Undergraduate certificate Welding | 236 | 12/10/12 | Paula J.S. Martin & Angela Dirks |
| 45. | AAS Welding and nondestructive testing technology | 236 | 12/10/12 | Angela Dirks |
| 46. | Geomatics | 249 | 12/12/12 | Bill Hazelton |
| 47. | ACCT A295 | 326 | 02/07/13 | Pat Fort  
cfort@uaa.alaska.edu |
| 48. | ADT A156 | 328 | 02/07/13 | Kelly Smith, Director  
kjsmith@uaa.alaska.edu |
| 49. | AET A101 | 330 | 02/07/13 | Donald Ketner, **Chair**  
dketner1@uaa.alaska.edu |
| 50. | AET A102 | 330 | 02/07/13 | Donald Ketner, **Chair**  
dketner1@uaa.alaska.edu |
| 51. | AKNS A215 | 332 | | Waiting to hear back |
| 52. | ART A203 | 341 | 02/07/13 | Joanna Claxton  
Administrative Assistant  
anjc@uaa.alaska.edu |
| 53. | ART A261 | 342 | 02/07/13 | Joanna Claxton  
Administrative Assistant  
anjc@uaa.alaska.edu |
| 54. | ART A262 | 342 | 02/07/13 | Joanna Claxton  
Administrative Assistant  
anjc@uaa.alaska.edu |
| 55. | ART A360A | 343 | 02/07/13 | Joanna Claxton  
Administrative Assistant  
anjc@uaa.alaska.edu |
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<td>Allan Barnes</td>
<td><a href="mailto:arbarnes@uaa.alaska.edu">arbarnes@uaa.alaska.edu</a></td>
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<td><a href="mailto:Afjmm2@uaa.alaska.edu">Afjmm2@uaa.alaska.edu</a></td>
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<td>498</td>
<td>02/07/13</td>
<td>Beth Sirles</td>
<td><a href="mailto:afeas@uaa.alaska.edu">afeas@uaa.alaska.edu</a></td>
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</table>
I. Initiation Date: November 9, 2012

II. Course Information
A. College: College of Arts and Sciences
B. Course Title: Introduction to Composition
C. Course Number: ENGL A111
D. Credit Hours: 3.0 Credits
E. Contact Time: 3 hours per week
F. Grading Information A-F
G. Course Description
   English A111 provides instruction in responding to academic and civic writing situations. Students learn rhetorical knowledge (e.g., how to write for a purpose and an audience, how to adopt an appropriate voice, tone, and level of formality); they engage in critical thinking, reading, and writing; they learn about processes and technologies available for producing texts; and they refine knowledge of academic conventions, including inquiry and research writing, documentation, and Standard Written English.
H. Lab Fees: Yes
I. Coordination: UAA Faculty Listserv, Community Campuses, Program Coordinators
J. Prerequisites
   [ENGL A109 with a minimum grade of C] OR [PRPE A108 with a minimum grade of C] OR [Accuplacer-Reading Comp with score of 080 and Accuplacer-Sentence Skills with score of 090] OR [Enhanced ACT English with score of 22] OR [ACT English with score of 22] OR [SAT Critical Reading Score with score of 530] OR [SAT Verbal Score with score of 530].
K. Registration Restrictions: None
L. Course Attributes: UAA GER Written Communication.

III. Course Level Justification
This lower level written communication GER introduces students to college-level composition and serves as an entry point to a comprehensive writing education that extends across students’ coursework in the university.
IV. Instructional Goals and Student Learning Outcomes

### Instructional Goals

Writing instructors will *engage students in the construction of meaning* and an inquiry into the effects of their own writing and the writing of others. Instructors identify the characteristic features and strategies of particular writing tasks; and they design materials and activities that enable students to engage in those strategies (moving from guided demonstration, to collaborative practice, to independent composing). They will deliver explicit knowledge about writing in proximity to practice, combining knowledge about writing with practice activities that engage students in composing for multiple purposes, audiences, and occasions.

The instructor will demonstrate and provide practice

1. in applying *rhetorical knowledge*, by creating assignments with specific contexts, purposes, and audience expectations.
2. in *critical reading and thinking* by exploring the uses of writing as a critical reading and thinking method, and by identifying the relationships among language, knowledge, and power in different contexts.
3. in *composing processes and strategies* by scaffolding assignments in stages; reviewing work in progress; and employing the technologies writers commonly use to communicate.
4. in following *discourse conventions* by clarifying through assignment instructions expected conventions of usage, specialized vocabulary, format, and documentation.
5. with *inquiry and information literacy* by designing specific contexts for inquiry and identifying the ethical use of appropriate and credible resources.

### Student Learning Outcomes and Assessment Measures

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>The student will be able to</td>
<td>Compositions that respond to a variety of rhetorical situations (e.g. timed writing, narrative, analysis, argument)</td>
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<tr>
<td>1. <strong>Apply rhetorical knowledge.</strong> Adapt their writing to a variety of purposes, audiences, and composing situations by selecting and using the most appropriate genres and modes of communication (lexical, visual, and oral).</td>
<td>Reflections on the rhetorical choices and decisions authors make to shape a text for a specific audience and purpose</td>
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</tbody>
</table>
2. Engage in *critical reading and thinking.*
Identify in texts main ideas and arguments; the rhetorical purpose of organization and of genre conventions; relationships between and among texts and their ideas; personal and authorial bias; and logical contradictions.

| Reading responses and/or timed writing that summarizes, analyzes, evaluates, and synthesizes |
| Discussion leadership and participation |

3. Use *composing process and strategies.*
Develop flexible strategies for generating, selecting genres, arranging, revising, editing, and proof-reading multiple drafts, using collaborative composing and reviewing strategies and a variety of composing technologies.

| Drafting assignments |
| Revision assignments |
| Peer review |
| Reflections on writing practices |

4. Follow *discourse conventions.*
Construct meaningful and coherent texts that fulfill audience needs and expectations in terms of genre, main ideas, tone, syntax, punctuation, mechanics, spelling, and the documentation of sources in current APA style, consulting a style manual or bibliographic management system as needed.

| Research-supported writing assignments |
| Revision assignments |
| Reflections on revision and editing choices |

5. Demonstrate *inquiry and information literacy.*
Recognize when information is needed (to discover and develop ideas and arguments) and have the ability to locate, evaluate, and use appropriate and credible information effectively and ethically.

| Exercises in summary, paraphrase, and direct quotation |
| Research-supported writing assignments |
| Annotated bibliography |
| Reflections on inquiry strategies and results |

V. Course Outline

A. Knowledge of Rhetorical Situations
   1. Occasions for writing—time, place, and social context
   2. Genre as social action
   3. A writer’s purpose and motivation
   4. The needs and expectations of the audience
   5. Voice, tone, and levels of formality
   6. Lexical, visual, and oral modes for making meaning
   7. Delivery options
B. Critical Reading and Thinking
   1. Critical reading strategies
   2. Critical thinking strategies
   3. Cogent reasoning

C. Composing Processes and Strategies
   1. Invention and prewriting: generating ideas and arguments
   2. Collaboration
   3. Arrangement and organization
   4. Design principles
   5. Style choices: sentence level strategies for achieving clarity, coherence, conciseness, and authorial voice
   6. Peer review
   7. Revision strategies

D. Knowledge of Discourse Conventions
   1. Entering the conversation
   2. Forecasting and signposting
   3. Genre patterns
   4. Sentence types
   5. Punctuation and mechanics
   6. In-text citation and end of text documentation (current APA Style)

E. Inquiry and Information Literacy
   1. Research questions: determining the extent of information needed
   2. Search strategies: accessing the needed information effectively and efficiently
   3. Credibility: evaluating information and its sources critically
   4. Integration and synthesis: incorporating selected information into one’s knowledge base through quotation, paraphrase, and summary
   5. Application: using information effectively and ethically to accomplish a specific rhetorical purpose

VI. Sample Unit Sequences (four writing units are typical)

A. Thematic Sequence
   1. Critical Literacy: students respond critically to multiple readings organized around a recurrent theme
   2. Cultural Literacy: students extend thematic inquiry by integrating knowledge from critical reading into a narrative of their own experience to elicit an empathic response
   3. Media Literacy: students rhetorically analyze a multimodal text
   4. Community Literacy: students investigate a problem or issue within the local community and position themselves to advocate for a specific policy or action that addresses the issue and resolves the problem
B. Genre Sequence
   1. Writing a Narrative: memoir or profile
   2. Writing Analytically: rhetorical analysis
   3. Arguing a Position: research-supported proposal
   4. Summarizing and Evaluating Sources: annotated bibliography or fact sheet
   5. Reporting Information: research-supported report
   6. Writing a Review: criteria-based evaluation

VII. Suggested Main Texts (choose one)


VIII. Suggested Supplemental Text


IX. Bibliography

   Assessment


   Collaborative Learning


**Diversity**


**English Language Learning**


**Error and Grammar**


**Genre**


**Multiple Literacies, Multimodality, and Technology**


**Rhetoric and Composition Theory**


**Plagiarism**


**Social Contexts for Writing**


1a. School or College
   CT CTC
1b. Department
   HPER

2. Complete Program Title/PREFIX
   Athletic Training

3. Type of Program
   Choose one from the appropriate drop down menu:
   Undergraduate:  or  Graduate:
                  Minor                       or  CHOOSE ONE

   This program is a Gainful Employment Program:
   □ Yes  or  □ No

4. Type of Action:
   PROGRAM
   □ Add
   □ Change
   □ Delete

   PREFIX
   □ Add
   □ Change
   □ Inactivate

5. Implementation Date (semester/year)
   From:  Fall/2013  To:  1/9999

6a. Coordination with Affected Units
   Department, School, or College:  Medical Assisting
   Initiator Name (typed):  Michael Chriss
   Initiator Signed Initials: ________
   Date: ______________________

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)
   Date: 01/09/13

6c. Coordination with Library Liaison
   Date: 01/09/13

7. Title and Program Description - Please attach the following:
   □ Cover Memo  □ Catalog Copy in Word using the track changes function

8. Justification for Action
   The course MA A101 Medical Terminology is being added to strengthen the program in an area where students need additional instruction.

   Initiator (faculty only)
   Michael Chriss
   Date

   □ Approved  □ Disapproved
   Dean/Director of School/College
   Date

   □ Approved  □ Disapproved
   Undergraduate/Graduate Academic
   Date

   □ Approved  □ Disapproved
   Board Chair
   Date

   □ Approved  □ Disapproved
   Provost or Designee
   Date
1a. School or College  
CT CTC

1b. Department  
HPER

2. Complete Program Title/Prefix  
Physical Education

3. Type of Program  
Choose one from the appropriate drop down menu:  
Undergraduate:  
Bachelor of Science  
Graduate:  
CHOOSE ONE  
This program is a Gainful Employment Program:  
☐ Yes  or  ☒ No

4. Type of Action:  
PROGRAM  
☐ Add  
☒ Change  
☐ Delete  

PREFIX  
☐ Add  
☐ Change  
☐ Inactivate

5. Implementation Date (semester/year)  
From:  Fall/2013  
To:  9999

6a. Coordination with Affected Units  
Department, School, or College:  Biology, Chemistry, Dietetics & Nutrition, Physics, Psychology  
Initiator Name (typed):  Michael Chriss  
Initiator Signed Initials:  
Date:  

6b. Coordination Email submitted to Faculty Listserv (uaa-faculty@lists.uaa.alaska.edu)  
Date: 01/03/13

6c. Coordination with Library Liaison  
Date: 01/03/13

7. Title and Program Description - Please attach the following:  
☒ Cover Memo  
☒ Catalog Copy in Word using the track changes function

8. Justification for Action  
Existing Health and Fitness Leadership emphasis is being restructured to include 2 options in order to streamline requirements for students. This should decrease time to completion for select BSPE students.

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HEALTH, PHYSICAL EDUCATION AND RECREATION

Eugene Short Hall (ESH), Room 125, (907) 786-4083
www.uaa.alaska.edu/hper

The Department of Health, Physical Education and Recreation is committed to excellence in offering courses within the discipline of physical education and related disciplines. The courses provide the foundation for an undergraduate major that prepares students for leadership roles in health and fitness or outdoor recreation as well as minors and occupational endorsement certificates within the discipline. In addition, the department offers a variety of courses for students from other fields who wish to learn new physical skills and/or develop personal wellness.

Enrolling in Health, Physical Education and Recreation Courses

Acknowledgement of Risk, Release of Liability and Medical Questionnaire Form: During the first class session, students will receive information about the course. A verbal description will be provided about the inherent risks associated with specific areas and activities. Students may be asked to complete one or all of the following: acknowledgement of risk forms, release of liability statements and provide personal medical information and numbers. Students may be asked to obtain a physical examination and medical consent from a health professional before participation in classes.

Minors: Sixteen- and 17-year-old students must receive department chair approval before they will be allowed to enroll in courses. Students under 16 cannot enroll in HPER classes. Approved students must also meet the university’s Secondary School Student Enrollment Requirements (see Chapter 7).

The university or the department reserves the right to deny or discontinue the enrollment of a student in a course or courses if the university or the department determines that the student lacks the maturity, the legal or intellectual ability, or the academic preparedness to participate on an equal footing with other students, or if it is otherwise not in the best interest of the university or the department for the student to participate.

Behavioral Expectations: Due to the inherent risks involved in activity courses, HPER’s safety and risk management policies and procedures are strictly enforced. Students are expected to comply with all policies and procedures. HPER reserves the right to withdraw from a course any student(s) who fail(s) to demonstrate adherence to policy that may pose a safety risk to themselves or others.

Any financial reimbursements related to such withdrawals are subject to standard university refund policies.

Outdoor/Adventure Courses: The Department of Health, Physical Education and Recreation provides outdoor adventure education through the use of hands-on techniques. Course offerings are diverse and include topics such as backpacking, rock climbing, sea kayaking, winter camping, emergency medicine, and wilderness leadership. Outdoor/adventure classes are held in Alaska’s wilderness, an environment that can pose a risk to even the most experienced outdoor leader.

Students may be required to perform activities in extremely inclement weather i.e., rain, sleet, snow, wind or sub-zero temperatures. Additionally, there is an assumption that a minimum level of physical fitness is needed to succeed in and enjoy many of the activities. Consequently, before enrolling in these courses, students should review the following information.

1. Physical Fitness Level

Many 100-level courses have been designed for the student with an average level of fitness and health; e.g., a student would be expected to comfortably travel five miles over easy terrain. If a higher than average fitness level is required, a special note will identify the necessary level of fitness.

a. Good fitness is defined as above average fitness relative to a typical, healthy adult. Courses that require good fitness will involve a moderate degree of physical activity, may involve travel over challenging terrain, may involve carrying a pack weighing up to 50 pounds, or may involve multiple hours of exercise. A student who is physically or mentally unprepared to withstand a moderate amount of exercise should not enroll in the course.
b. **Excellent fitness** is defined as possessing health of outstanding quality or being in remarkably good physical condition. Excellent fitness is required for expedition courses. Expedition courses include difficult to extremely difficult terrain on uneven and steep ground with rapidly increasing elevation while carrying a backpack that may weigh 50 pounds or more in less than ideal weather. A student who is physically or mentally unprepared to withstand an intense amount of exercise with challenging conditions should not enroll in the course.

2. **Venue and Terrain Difficulty**

Students will hike and travel in a variety of environments in outdoor/adventure courses. The following breakdown provides an overview of terrain difficulty.

a. **Easy terrain** can be negotiated by novices. Traveling is usually done on well-maintained trail systems; can include hiking, skiing or snowshoeing; elevation gains/losses generally under 500 feet per mile; and stream crossings of calf deep or less. Off-trail touring includes traveling on firm ground over gentle terrain.

b. **Moderate terrain** requires good physical fitness. Traveling is usually done on rugged trails or off trail. The hiking often includes inclines/declines of 500 to 1500 feet per mile. Off-trail travel can include bushwhacking; uneven, wet or marshy ground; scrambling up, over or around small terrain features; and river crossings up to knee deep.

c. **Difficult terrain** requires excellent physical fitness. Traveling is usually done off trail and can include uneven, challenging ground; lack of firm footing; steep tundra, rock or scree; wet, snowy or icy slopes, and thigh- to waist-deep river crossings. Specialized gear may be required for travel.

d. **Extremely difficult terrain** requires excellent physical fitness. Traveling is done off trail and participants must be prepared to endure all of the features listed under “difficult terrain” for long hours and potentially multiple days. Specialized gear is usually required for travel.

3. **Student Health Insurance**

Students enrolling in many outdoor/adventure activity courses are provided with basic health insurance coverage during the field sessions only. This policy is intended to supplement personal policies and does not include the cost of emergency evacuation.

**Occupational Endorsement Certificate, Fitness Leadership**

The Fitness Leadership Occupational Endorsement Certificate provides students the opportunity to acquire the knowledge and skills necessary to develop a career in the ever-changing fitness industry. An array of career possibilities is available to individuals who successfully complete this program in group fitness instruction or personal training.

This comprehensive program provides students with 90 hours of leadership training in exercise theory and practice and 60 hours of training in their chosen fitness specialty or emphasis area: Group Fitness Leader or Personal Trainer. All classes combine current fitness research and training techniques with practical, hands-on teaching experience. This program follows the guidelines established by the American Council on Exercise (ACE) and the American College of Sports Medicine (ACSM).

The Fitness Leadership Occupational Endorsement Certificate is designed to provide quality education and training to individuals interested in working in the fitness industry. Of the required 10 credits, 7 include lecture courses and 3 are laboratory sessions. The labs are enhanced by practicum experiences that reinforce skills, knowledge, and leadership qualities. Students receive training in basic applied kinesiology and exercise physiology, nutrition and healthy weight loss, injury prevention, fitness assessment, legal considerations, special populations, health screening, leadership, and motivation.

**Admission Requirements**

Satisfy the UAA Admissions Requirements for Occupational Endorsement Certificates found in Chapter 7, Academic Standards and Regulations.

**Academic Progress**

A minimum grade of B or better in each required course.

**Occupational Endorsement Requirements**

1. Complete the following required courses (7 credits):
2. Complete the required courses within one of the following two emphasis areas (3 credits):

**Group Fitness Leader**
- PEP A116 Techniques in Group Fitness Instruction 2
- Choose PER activity course related to specialty 1

**Personal Trainer**
- PEP A117 Techniques in Personal Training 2
- PER A118 Beginning Weight Training 1

3. A total of 10 credits is required for this certificate.

**Occupational Endorsement Certificate, Outdoor Leadership**

The Outdoor Leadership (OL) Occupational Endorsement Certificate (OEC) is designed to provide quality education and training to individuals interested in working in the outdoor recreation industry. The OL OEC provides students the opportunity to acquire the foundational knowledge, skills, and abilities necessary for an entry level position in the ever-changing recreation and tourism industry. An array of career possibilities is available to individuals who successfully complete this program. Students can enter into the field of outdoor/adventure education, guiding, activity/recreation therapy, or as a recreation specialist. There are positions in the government, non-profit, ecotourism, education, health care, and for-profit sectors of industry.

This comprehensive program provides students with 19 credits of training in technical outdoor skills, judgment, decision making, leadership, and risk assessment and hazard evaluation. Nine credits comprise the core curriculum. The student can then choose an emphasis area in water-based or land-based outdoor leadership. Classes combine current recreation research and instructional techniques with practical, hands-on teaching experience with extended field application. The field-based courses allow for practical skill application that reinforces technical knowledge, skills, abilities, and refinement of leadership skills.

**Admission Requirements**

Satisfy the UAA Admissions Requirements for Occupational Endorsement Certificates found in Chapter 7, Academic Standards and Regulations.

**Academic Progress**

A minimum grade of B or better in each required course.

**Occupational Endorsement Requirements**

1. Complete the following required courses (9 credits):
   - PEP A262 Foundations of Outdoor Recreation 3
   - PEP A365 Outdoor Leadership Theory and Practice 3
   - PER A169 Four-Season Backpacking 3

2. Complete the required courses within one of the following two emphasis areas (10 credits):

   **Water-Based Leadership Emphasis (10 credits):**
   - PEP A467D Water-Based Outdoor Leadership 2
   - PER A150 Water Safety and Rescue 1
   - PER A151 Beginning Canoeing 1
   - PER A152 Beginning River Rafting 1
   - PER A153 Beginning Sea Kayaking 1

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DN A101  Principles of Nutrition (3)  3
or
DN A203  Nutrition for Health Sciences (3)
PEP A112  First Aid and CPR for Professionals  1
PEP A115  Fitness Leadership/Group Fitness and Personal Training  3
Other requirements for Water-based: Pass a swimming test and possess current Wilderness First Responder Certification from a recognized institution at time of completion.

**Land-based Leadership Emphasis (10 credits):**

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<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>PER A146</td>
<td>Beginning Rock Climbing</td>
<td>1</td>
</tr>
<tr>
<td>PER A147</td>
<td>Beginning Ice Climbing</td>
<td>1</td>
</tr>
<tr>
<td>PER A164</td>
<td>Skiing Alaska’s Backcountry</td>
<td>2</td>
</tr>
<tr>
<td>PER A165</td>
<td>Avalanche Hazard Recognition and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evaluation</td>
<td></td>
</tr>
<tr>
<td>PER A181</td>
<td>Crevasse Rescue Techniques</td>
<td>1</td>
</tr>
<tr>
<td>Choose one of the following:</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>PER A246</td>
<td>Intermediate Rock Climbing (2)</td>
<td></td>
</tr>
<tr>
<td>PER A287</td>
<td>Expedition Backpacking (2)</td>
<td></td>
</tr>
</tbody>
</table>

Other requirements for Land-based: Possess a current Wilderness First Responder Certification from a recognized institution at time of completion.

3. A total of 19 credits is required for this certificate.

**Bachelor of Science, Physical Education**

The core of the Bachelor of Science in Physical Education degree emphasizes the broad fundamental principles of physical education, including scientific foundations, psychological and cultural aspects, assessment and testing methods, trends, and leadership development in a variety of physical activities. Students may choose to pursue study in one of two emphasis areas within the degree: Health and Fitness Leadership or Outdoor Leadership and Administration.

The Health and Fitness Leadership emphasis and the Outdoor Leadership and Administration emphases prepare students for professional positions in rapidly growing fields. Each emphasis focuses on developing leadership expertise as well as the knowledge, physical skills, and technical competencies to prepare graduates for the job market. The Health and Fitness Leadership emphasis readies students for employment in hospital-based health education and fitness programs, community or public health/fitness programs, private health clubs and fitness facilities, corporate fitness/wellness programs, military fitness centers, as personal trainers, or helps them prepare for further education in physical therapy. The Outdoor Leadership and Administration emphasis readies graduates for employment with youth or recreational programs, adventure tourism, guide services, camps, schools, or a host of experiential education opportunities.

**Student Learning Outcomes**

Graduates of the Bachelor of Science in Physical Education will have demonstrated:

- Knowledge of physical education concepts as well as concepts related to a specific area of emphasis.
- Competency in many activity forms and proficiency in a few.
- Ability to apply established national standards in the field(s).
- Proficiency in entry-level discipline specific administrative skills.
- Proficiency in general and discipline-specific technologies.
- Effective leadership skills, including the abilities to: 1) evaluate and direct/re-direct skillful movement, 2) lead a variety of activities, 3) use appropriate motivational strategies, 4) employ appropriate safety and prevention techniques, 5) exercise sound judgment and good decision-making skills, and 6) communicate effectively.

**Admission Requirements**

1. Complete the Baccalaureate Degree Programs Admission Requirements in Chapter 7, Academic Standards and Regulations.
2. Completion of BIOL A111 and PEP A181 with a grade of C or better
3. Meet with a Health, Physical Education and Recreation advisor regarding program requirements and development of a program of study.
4. The degree requires computer competency which may be demonstrated by:
   a. successful completion of an approved university computer course,
   b. work-related experience requiring computer competency as approved by faculty or major advisor, or
   c. demonstrated computer competency as approved by faculty or major advisor.

Advising
All students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever difficulties arise.

Academic Progress
A grade of C or better in all emphasis-specific courses and an overall GPA of 2.75 is required to enroll in the internship. A grade of B or better is required in the internship (PEP A495/PEP A496).

Degree Requirements
1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
2. Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
3. Complete the Support Courses and the Major Requirements listed below.

Required Support Courses
Complete the following support courses, some of which may be used to satisfy the General Education Requirements:

- BIOL A111 Human Anatomy and Physiology I 4
- BIOL A112 Human Anatomy and Physiology II 4
- DN A203 Nutrition for Health Sciences (3) 3 or
- DN A215 Sports Nutrition (3)
- HS A220 Core Concepts in the Health Sciences 3
- PSY A111 General Psychology (3) 3 or
- PSY A150 Lifespan Development (3)

Major Requirements
1. Complete the following core courses (39 credits):
   - PEP A181 Introduction to Health, Physical Education and Recreation 3
   - PEP A182 Technology in Health, Physical Education and Recreation 1
   - PEP A183 Wellness Principles 1
   - PEP A184 Fundamental Motor Skills 1
   - PEP A280 Leadership in Health, Physical Education and Recreation 3
   - PEP A281 Leadership in Activities for Diverse Populations 2
   - PEP A282 Leadership in Initiative Activities 2
   - PEP A284 Leadership in Fitness Activities 2
   - PEP A382 Kinesiology and Biomechanics 4
PEP A383  Movement Theory and Motor Development  3
PEP A384  Cultural and Psychological Aspects of Health and Physical Activity  3
PEP A385  Physiology of Exercise  4
PEP A486  Standards and Assessment in Health, Physical Education, and Recreation  3
PEP A487  Administration and Supervision in Health, Physical Education and Recreation  3
Complete two from:  4
PEP A283  Leadership in Aquatic Activities (2)
PEP A285  Leadership in Team Activities (2)
PEP A286  Leadership in Individual and Dual Activities (2)
PEP A287  Leadership in Outdoor Recreation Activities (2)
PEP A288  Leadership in Rhythmic Activities (2)

2. Complete one of the following emphasis areas:

**Health and Fitness Leadership Emphasis (43 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA A151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>PEP A251</td>
<td>Prevention and Care of Activity-Related Injuries</td>
<td>3</td>
</tr>
<tr>
<td>PEP A454</td>
<td>Exercise Testing and Prescription</td>
<td>4</td>
</tr>
<tr>
<td>PEP A455</td>
<td>Cardiac Rehabilitation and Special Populations</td>
<td>4</td>
</tr>
<tr>
<td>PEP A456</td>
<td>Contemporary Personal Health Issues</td>
<td>3</td>
</tr>
<tr>
<td>PEP A495</td>
<td>Internship in Health and Fitness Leadership</td>
<td>6</td>
</tr>
</tbody>
</table>

Complete one of the following options:

Exercise Management Option (20 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA A231</td>
<td>Fundamentals of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BA A260</td>
<td>Marketing Practices</td>
<td>3</td>
</tr>
<tr>
<td>HS/NS A433</td>
<td>Health Education: Theory and Practice (3)</td>
<td>3</td>
</tr>
<tr>
<td>or PEP A490</td>
<td>Special Topics in Health, Physical Education and Recreation (3)</td>
<td></td>
</tr>
<tr>
<td>PEP A453</td>
<td>Health Promotion</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives  8

Exercise and Rehabilitation Sciences Option (20 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEP A346</td>
<td>Lower Body Injury Assessment Skills</td>
<td>3</td>
</tr>
<tr>
<td>PEP A347</td>
<td>Upper Body Injury Assessment Skills</td>
<td>3</td>
</tr>
</tbody>
</table>

Science and Rehabilitation Core  14

Complete courses from at least two of the following prefixes in consultation with the faculty advisor:

BIOL, CHEM, DN, PEP, PHYS, PSY

**Outdoor Leadership and Administration (43 credits)**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA A151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>ENVI A303</td>
<td>Environmental Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PEP A262</td>
<td>Foundations of Outdoor Recreation</td>
<td>3</td>
</tr>
<tr>
<td>PEP A264</td>
<td>Recreation Program Planning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>PEP A363</td>
<td>Natural History Interpretation and Environmental Education</td>
<td>3</td>
</tr>
<tr>
<td>PEP A365</td>
<td>Outdoor Leadership Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>PEP A464</td>
<td>Outdoor Recreation Administration</td>
<td>3</td>
</tr>
<tr>
<td>PEP A467C</td>
<td>Land-Based Outdoor Leadership</td>
<td>2</td>
</tr>
<tr>
<td>PEP A467D</td>
<td>Water-Based Outdoor Leadership</td>
<td>2</td>
</tr>
<tr>
<td>PEP A496</td>
<td>Internship in Outdoor Leadership</td>
<td>6</td>
</tr>
<tr>
<td>PER A169</td>
<td>Four-Season Backpacking</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Choose a minimum of 6 credits from the following:</td>
<td>6</td>
</tr>
<tr>
<td>PER A146</td>
<td>Beginning Rock Climbing (1)</td>
<td></td>
</tr>
<tr>
<td>PER A147</td>
<td>Beginning Ice Climbing (1)</td>
<td></td>
</tr>
<tr>
<td>PER A148</td>
<td>Beginning Indoor Sport Climbing I (1)</td>
<td></td>
</tr>
<tr>
<td>PER A150</td>
<td>Water Safety and Rescue (1)</td>
<td></td>
</tr>
<tr>
<td>PER A151</td>
<td>Beginning Canoeing (1)</td>
<td></td>
</tr>
<tr>
<td>PER A152</td>
<td>Beginning River Rafting (1)</td>
<td></td>
</tr>
<tr>
<td>PER A153</td>
<td>Beginning Sea Kayaking (1)</td>
<td></td>
</tr>
<tr>
<td>PER A164</td>
<td>Skiing Alaska’s Backcountry (2)</td>
<td></td>
</tr>
<tr>
<td>PER A165</td>
<td>Avalanche Hazard Recognition and Evaluation (1)</td>
<td></td>
</tr>
<tr>
<td>PER A181</td>
<td>Crevasse Rescue Techniques (1)</td>
<td></td>
</tr>
<tr>
<td>PER A246</td>
<td>Intermediate Rock Climbing (2)</td>
<td></td>
</tr>
<tr>
<td>PER A252</td>
<td>Intermediate River Rafting (2)</td>
<td></td>
</tr>
<tr>
<td>PER A253</td>
<td>Intermediate Sea Kayaking (2)</td>
<td></td>
</tr>
</tbody>
</table>

3. A minimum of 120 credits is required for the degree of which 42 credits must be upper division.

**Other requirements**: Pass a swimming test and possess Current Wilderness First Responder Certification from a recognized institution at time of completion

**Recommended Course Sequence**

See a Health, Physical Education and Recreation advisor for information on a recommended course sequence.

**Minor, Athletic Training**

Students who wish to minor in Athletic Training must complete the following requirements. A minimum of 23 credits, including 14 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in PEP A346 and PEP A347.

1. Complete the following requirements (23 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN A203</td>
<td>Nutrition for Health Sciences (3)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DN A215</td>
<td>Sports Nutrition (3)</td>
<td></td>
</tr>
<tr>
<td>MA A101</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>PEP A251</td>
<td>Prevention and Care of Activity-Related Injuries</td>
<td>3</td>
</tr>
<tr>
<td>PEP A346</td>
<td>Lower Body Injury Assessment Skills</td>
<td>3</td>
</tr>
</tbody>
</table>
Minor, Coaching

Students who wish to minor in Coaching must complete the following requirements. A minimum of 22 credits, including 10 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in PEP A130 and sport specific coaching course.

1. Complete the following core courses (20 credits):
   - PEP A130 Introduction to Coaching 3
   - PEP A230 Sport Ethics 1
   - PEP A231 Drugs and Sport 1
   - PEP A251 Prevention and Care of Activity-Related Injuries 3
   - PEP A281 Leadership in Activities for Diverse Populations 2
   - PEP A383 Movement Theory and Motor Development 3
   - PEP A384 Cultural and Psychological Aspects of Health and Physical Activity 3
   - PEP A385 Physiology of Exercise 4

2. Choose one of the following: 2
   - PEP A233 Coaching Track and Field and Running (2)
   - PEP A234 Coaching Wrestling (2)
   - PEP A235 Coaching Swimming and Diving (2)
   - PEP A236 Coaching Skiing (2)
   - PEP A237 Coaching Figure Skating (2)
   - PEP A238 Coaching Gymnastics (2)
   - PEP A239 Coaching Baseball/Softball (2)
   - PEP A240 Coaching Football (2)
   - PEP A241 Coaching Basketball (2)
   - PEP A242 Coaching Soccer (2)
   - PEP A243 Coaching Hockey (2)
   - PEP A244 Coaching Volleyball (2)

Minor, Health and Fitness Leadership*

Students who wish to minor in Health and Fitness Leadership must complete the following requirements. A minimum of 27 credits, including 6 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. A minimum grade of C or better is required in the courses within the option.

1. Complete the following core courses (24 credits):
   - BIOL A111/L Human Anatomy and Physiology I with Laboratory 4
   - BIOL A112/L Human Anatomy and Physiology II with Laboratory 4
   - DN A203 Nutrition for Health Sciences (3) or 3
   - DN A215 Sports Nutrition (3)
PEP A115  Fitness Leadership/Group Fitness and Personal Training  3
PEP A385  Physiology of Exercise  4
PEP A442  Exercise and Aging  3
PEP A453  Health Promotion  3

2. Choose one of the following options:  3-4

**Fitness Instruction Option (3 credits)**
PEP A116  Techniques in Group Fitness Instruction  2
PER activity course related to specialty  1

**Personal Training Option (3 credits)**
PEP A117  Techniques in Personal Training  2
PER A118  Beginning Weight Training  1

**Wellness Option (4 credits)**
PEP A116  Techniques in Group Fitness Instruction  2
PEP A117  Techniques in Personal Training  2

3. A minimum of 27 credits is required for this minor.

* Not available to Physical Education majors with Health and Fitness Leadership emphasis.

**Minor, Outdoor Leadership**

Students who wish to minor in Outdoor Leadership must complete the following requirements. A minimum of 22 credits, including 7 upper division credits are required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of B or better in PEP A467C or PEP A467D.

1. Complete the following core courses (16 credits)
PEP A262  Foundations of Outdoor Recreation  3
PEP A264  Recreation Program Planning and Evaluation  3
PEP A365  Outdoor Leadership Theory and Practice  3
PEP A467C  Land-Based Outdoor Leadership  2
PEP A467D  Water-Based Outdoor Leadership  2
PER A169  Four-Season Backpacking  3

2. Choose a minimum of three (3) credits from the following:  3
PER A150  Water Safety and Rescue (1)
PER A151  Beginning Canoeing (1)
PER A152  Beginning River Rafting (1)
PER A153  Beginning Sea Kayaking (1)
PER A252  Intermediate River Rafting (2)
PER A253  Intermediate Sea Kayaking (2)

3. Choose a minimum of three (3) credits from the following:  3
PER A146  Beginning Rock Climbing (1)
PER A147  Beginning Ice Climbing (1)
PER A148  Beginning Indoor Sport Climbing I (1)
PER A164  Skiing Alaska’s Backcountry (2)
PER A181  Crevasse Rescue Techniques (1)
PER A246  Intermediate Rock Climbing (2)
4. A minimum of 22 credits is required for this minor.

**Other requirements:** Pass a swimming test and possess current certification in First Aid and CPR

*Not available to Physical Education majors with Outdoor Leadership and Administration emphasis*

**Minor, Physical Education** *

Students who wish to minor in Physical Education must complete the following requirements. A total of 30 credits, including 10 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in the leadership courses.

1. Complete the following core courses (15 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL A111</td>
<td>Human Anatomy and Physiology I with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A112</td>
<td>Human Anatomy and Physiology II with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>PEP A181</td>
<td>Introduction to Health, Physical Education and Recreation</td>
<td>3</td>
</tr>
<tr>
<td>PEP A182</td>
<td>Technology in Health, Physical Education and Recreation</td>
<td>1</td>
</tr>
<tr>
<td>PEP A183</td>
<td>Wellness Principles</td>
<td>1</td>
</tr>
<tr>
<td>PEP A184</td>
<td>Fundamental Motor Skills</td>
<td>1</td>
</tr>
<tr>
<td>PEP A280</td>
<td>Leadership in Health, Physical Education and Recreation</td>
<td>3</td>
</tr>
<tr>
<td>PEP A281</td>
<td>Leadership in Activities for Diverse Populations</td>
<td>2</td>
</tr>
<tr>
<td>PEP A382</td>
<td>Kinesiology and Biomechanics</td>
<td>4</td>
</tr>
<tr>
<td>PEP A383</td>
<td>Movement Theory and Motor Development</td>
<td>3</td>
</tr>
</tbody>
</table>

2. Choose two of the following: 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEP A282</td>
<td>Leadership in Initiative Activities</td>
</tr>
<tr>
<td>PEP A283</td>
<td>Leadership in Aquatic Activities</td>
</tr>
<tr>
<td>PEP A284</td>
<td>Leadership in Fitness Activities</td>
</tr>
<tr>
<td>PEP A285</td>
<td>Leadership in Team Activities</td>
</tr>
<tr>
<td>PEP A286</td>
<td>Leadership in Individual and Dual Activities</td>
</tr>
<tr>
<td>PEP A287</td>
<td>Leadership in Outdoor Recreation Activities</td>
</tr>
<tr>
<td>PEP A288</td>
<td>Leadership in Rhythmic Activities</td>
</tr>
</tbody>
</table>

*Not available to Physical Education majors.

**FACULTY**

*Sandra Carroll-Cobb, Director/Associate Professor, slcarrollcobb@uaa.alaska.edu*

*Michael Chriss, Assistant Professor, mchriss@uaa.alaska.edu*

*Timothy Miller, Assistant Professor, tjmiller@uaa.alaska.edu*
HEALTH, PHYSICAL EDUCATION AND RECREATION

Eugene Short Hall (ESH), Room 125, (907) 786-4083
www.uaa.alaska.edu/hper

The Department of Health, Physical Education and Recreation is committed to excellence in offering courses within the discipline of physical education and related disciplines. The courses provide the foundation for an undergraduate major that prepares students for leadership roles in health and fitness or outdoor recreation as well as minors and occupational endorsement certificates within the discipline. In addition, the department offers a variety of courses for students from other fields who wish to learn new physical skills and/or develop personal wellness.

Enrolling in Health, Physical Education and Recreation Courses

Acknowledgement of Risk, Release of Liability and Medical Questionnaire Form: During the first class session, students will receive information about the course. A verbal description will be provided about the inherent risks associated with specific areas and activities. Students may be asked to complete one or all of the following: acknowledgment of risk forms, release of liability statements and provide personal medical information and numbers. Students may be asked to obtain a physical examination and medical consent from a health professional before participation in classes.

Minor: Sixteen- and 17-year-old students must receive department chair approval before they will be allowed to enroll in courses. Students under 16 cannot enroll in HPER classes. Approved students must also meet the university’s Secondary School Student Enrollment Requirements (see Chapter 7).

The university or the department reserves the right to deny or discontinue the enrollment of a student in a course or courses if the university or the department determines that the student lacks the maturity, the legal or intellectual ability, or the academic preparedness to participate on an equal footing with other students, or if it is otherwise not in the best interest of the university or the department for the student to participate.

Behavioral Expectations: Due to the inherent risks involved in activity courses, HPER’s safety and risk management policies and procedures are strictly enforced. Students are expected to comply with all policies and procedures. HPER reserves the right to withdraw from a course any student(s) whom a faculty member believes pose(s) a risk to themselves or others.

Any financial reimbursements related to such withdrawals are subject to standard university refund policies.

Outdoor/Adventure Courses: The Department of Health, Physical Education and Recreation provides outdoor adventure education through the use of hands-on techniques. Course offerings are diverse and include topics such as backpacking, rock climbing, sea kayaking, winter camping, emergency medicine, and wilderness leadership. Outdoor/adventure classes are held in Alaska’s wilderness, an environment that can pose a risk to even the most experienced outdoor leader.

Students may be required to perform activities in extremely inclement weather i.e., rain, sleet, snow, wind or sub-zero temperatures. Additionally, there is an assumption that a minimum level of physical fitness is needed to succeed in and enjoy many of the activities. Consequently, before enrolling in these courses, students should review the following information.

1. Physical Fitness Level

Many 100-level courses have been designed for the student with an average level of fitness and health; e.g., a student would be expected to comfortably travel five miles over easy terrain. If a higher than average fitness level is required, a special note will identify the necessary level of fitness.

a. Good fitness is defined as above average fitness relative to a typical, healthy adult. Courses that require good fitness will involve a moderate degree of physical activity, may involve travel over challenging terrain, may involve carrying a pack weighing up to 50 pounds or more, or may involve multiple hours of exercise. A student who is physically or mentally unprepared to withstand a moderate amount of exercise should not enroll in the course.
b. **Excellent fitness** is defined as possessing health of outstanding quality or being in remarkably good physical condition. Excellent fitness is required for expedition courses. Expedition courses include difficult to extremely difficult terrain on uneven and steep ground with rapidly increasing elevation while carrying a backpack that may weigh 50 pounds or more in less than ideal weather. A student who is physically or mentally unprepared to withstand an intense amount of exercise with challenging conditions should not enroll in the course.

2. **Venue and Terrain Difficulty**

   Students will hike and travel in a variety of environments in outdoor/adventure courses. The following breakdown provides an overview of terrain difficulty.

   a. **Easy terrain** can be negotiated by novices. Traveling is usually done on well-maintained trail systems; can include hiking, skiing or snowshoeing; elevation gains/losses generally under 500 feet per mile; and stream crossings of calm or deep or less. Off-trail touring includes traveling on firm ground over gentle terrain.

   b. **Moderate terrain** requires good physical fitness. Traveling is usually done on rugged trails or off trail. The hiking often includes inclines/declines of 500 to 1500 feet per mile. Off-trail travel can include bushwhacking; uneven, wet or marshy ground; scrambling up, over or around small terrain features; and river crossings up to knee deep.

   c. **Difficult terrain** requires excellent physical fitness. Traveling is usually done off trail and can include uneven, challenging ground; lack of firm footing; steep tundra, rock or scree; wet, snowy or icy slopes, and thigh- to waist-deep river crossings. Specialized gear may be required for travel.

   d. **Extremely difficult terrain** requires excellent physical fitness. Traveling is done off trail and participants must be prepared to endure all of the features listed under “difficult terrain” for long hours and potentially multiple days. Specialized gear is usually required for travel.

3. **Student Health Insurance**

   Students enrolling in many outdoor/adventure activity courses are provided with basic health insurance coverage during the field sessions only. This policy is intended to supplement personal policies and does not include the cost of emergency evacuation.

**Occupational Endorsement Certificate, Fitness Leadership**

The Fitness Leadership Occupational Endorsement Certificate provides students the opportunity to acquire the knowledge and skills necessary to develop a career in the ever-changing fitness industry. An array of career possibilities is available to individuals who successfully complete this program in group fitness instruction or personal training.

This comprehensive program provides students with 90 hours of leadership training in exercise theory and practice and 60 hours of training in their chosen fitness specialty or emphasis area: Group Fitness Leader or Personal Trainer. All classes combine current fitness research and training techniques with practical, hands-on teaching experience. This program follows the guidelines established by the American Council on Exercise (ACE) and the American College of Sports Medicine (ACSM).

The Fitness Leadership Occupational Endorsement Certificate is designed to provide quality education and training to individuals interested in working in the fitness industry. Of the required 10 credits, 7 include lecture courses and 3 are laboratory sessions. The labs are enhanced by practicum experiences that reinforce skills, knowledge, and leadership qualities. Students receive training in basic applied kinesiology and exercise physiology, nutrition and healthy weight loss, injury prevention, fitness assessment, legal considerations, special populations, health screening, leadership, and motivation.

**Admission Requirements**

Satisfy the UAA Admissions Requirements for Occupational Endorsement Certificates found in Chapter 7, Academic Standards and Regulations.

**Academic Progress**

A minimum grade of B or better in each required course.
**Occupational Endorsement Requirements**

1. Complete the following required courses (7 credits):
   - DN A101 Principles of Nutrition (3) 3
   - DN A203 Nutrition for Health Sciences (3)
   - PEP A112 First Aid and CPR for Professionals 1
   - PEP A115 Fitness Leadership/Group Fitness and Personal Training 3

2. Complete the required courses within one of the following two emphasis areas (3 credits):
   - **Group Fitness Leader**
     - PEP A116 Techniques in Group Fitness Instruction 2
     - Choose PER activity course related to specialty 1
   - **Personal Trainer**
     - PEP A117 Techniques in Personal Training 2
     - PER A118 Beginning Weight Training 1

3. A total of 10 credits is required for this certificate.

**Occupational Endorsement Certificate, Outdoor Leadership**

The Outdoor Leadership (OL) Occupational Endorsement Certificate (OEC) is designed to provide quality education and training to individuals interested in working in the outdoor recreation industry. The OL OEC provides students the opportunity to acquire the foundational knowledge, skills, and abilities necessary for an entry level position in the ever-changing recreation and tourism industry. An array of career possibilities is available to individuals who successfully complete this program. Students can enter into the field of outdoor/adventure education, guiding, activity/recreation therapy, or as a recreation specialist. There are positions in the government, non-profit, ecotourism, education, health care, and for-profit sectors of industry.

This comprehensive program provides students with 19 credits of training in technical outdoor skills, judgment, decision making, leadership, and risk assessment and hazard evaluation. Nine credits comprise the core curriculum. The student can then choose an emphasis area in water-based or land-based outdoor leadership. Classes combine current recreation research and instructional techniques with practical, hands-on teaching experience with extended field application. The field-based courses allow for practical skill application that reinforces technical knowledge, skills, abilities, and refinement of leadership skills.

**Admission Requirements**

Satisfy the UAA Admissions Requirements for Occupational Endorsement Certificates found in Chapter 7, Academic Standards and Regulations.

**Academic Progress**

A minimum grade of B or better in each required course.

**Occupational Endorsement Requirements**

1. Complete the following required courses (9 credits):
   - PEP A262 Foundations ofOutdoor Recreation 3
   - PEP A365 Outdoor Leadership Theory and Practice 3
   - PER A169 Four-Season Backpacking 3

2. Complete the required courses within one of the following two emphasis areas (10 credits):
   - **Water-Based Leadership Emphasis (10 credits):**
     - PEP A467D Water-Based Outdoor Leadership 2
     - PER A150 Water Safety and Rescue 1
PER A151  Beginning Canoeing  1
PER A152  Beginning River Rafting  1
PER A153  Beginning Sea Kayaking  1
PER A252  Intermediate River Rafting  2
PER A253  Intermediate Sea Kayaking  2

Other requirements for Water-based: Pass a swimming test and possess current Wilderness First Responder Certification from a recognized institution at time of completion.

Land-based Leadership Emphasis (10 credits):
PEP A467C  Land-Based Outdoor Leadership  2
PER A146  Beginning Rock Climbing  1
PER A147  Beginning Ice Climbing  1
PER A164  Skiing Alaska’s Backcountry  2
PER A165  Avalanche Hazard Recognition and Evaluation  1
PER A181  Crevasse Rescue Techniques  1
Choose one of the following:  2
PER A246  Intermediate Rock Climbing (2)
PER A287  Expedition Backpacking (2)

Other requirements for Land-based: Possess a current Wilderness First Responder Certification from a recognized institution at time of completion.

3. A total of 19 credits is required for this certificate.

Other requirements: Pass a swim test and possess current Wilderness First Responder Certification from a recognized institution at time of completion.

Bachelor of Science, Physical Education

The core of the Bachelor of Science in Physical Education degree emphasizes the broad fundamental principles of physical education, including scientific foundations, psychological and cultural aspects, assessment and testing methods, trends, and leadership development in a variety of physical activities. Students may choose to pursue study in one of two emphasis areas within the degree: Health and Fitness Leadership or Outdoor Leadership and Administration.

The Health and Fitness Leadership emphasis and the Outdoor Leadership and Administration emphases prepare students for professional positions in rapidly growing fields. Each emphasis focuses on developing leadership expertise as well as the knowledge, physical skills, and technical competencies to prepare graduates for the job market. The Health and Fitness Leadership emphasis readers students for employment in hospital-based health education and fitness programs, community or public health/fitness programs, private health clubs and fitness facilities, corporate fitness/wellness programs, military fitness centers, as personal trainers, or helps them prepare for further education in physical therapy. The Outdoor Leadership and Administration emphasis readers graduates for employment with youth or recreational programs, adventure tourism, guide services, camps, schools, or a host of experiential education opportunities.

Student Learning Outcomes

Graduates of the Bachelor of Science in Physical Education will have demonstrated:

- Knowledge of physical education concepts as well as concepts related to a specific area of emphasis.
- Competency in many activity forms and proficiency in a few.
- Ability to apply established national standards in the field(s).
- Proficiency in entry-level discipline specific administrative skills.
- Proficiency in general and discipline-specific technologies.
• Effective leadership skills, including the abilities to: 1) evaluate and direct/re-direct skillful movement, 2) lead a variety of activities, 3) use appropriate motivational strategies, 4) employ appropriate safety and prevention techniques, 5) exercise sound judgment and good decision-making skills, and 6) communicate effectively.

Admission Requirements
1. Complete the Baccalaureate Degree Programs Admission Requirements in Chapter 7, Academic Standards and Regulations.
2. Completion of BIOL A111 and PEP A181 with a grade of C or better
3. Meet with a Health, Physical Education and Recreation advisor regarding application, program admission requirements, and development of a program of study.
4. Submit a departmental application for admission to the Department of Health, Physical Education and Recreation.

Advising
All students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever difficulties arise.

Academic Progress
Maintain a 2.50 GPA or higher for the courses within the emphasis and a grade of C or better in all emphasis-specific courses and an overall GPA of 2.75 is required to enroll in the internship. A grade of B or better is required in the internship (PEP A495/PEP A496).

Degree Requirements
1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
2. Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
3. Complete the Support Courses and the Major Requirements listed below.

Required Support Courses
Complete the following support courses, some of which may be used to satisfy the General Education Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL A111</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL A112</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>DN A203</td>
<td>Nutrition for Health Sciences (3)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
</tr>
<tr>
<td>DN A215</td>
<td>Sports Nutrition (3)</td>
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</tr>
<tr>
<td>HS A220</td>
<td>Core Concepts in the Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td>PSY A111</td>
<td>General Psychology (3)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
</tr>
<tr>
<td>PSY A150</td>
<td>Lifespan Development (3)</td>
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</tr>
</tbody>
</table>

Major Requirements
1. Complete the following core courses (39 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEP A181</td>
<td>Introduction to Health, Physical Education and Recreation</td>
<td>3</td>
</tr>
<tr>
<td>PEP A182</td>
<td>Technology in Health, Physical Education and Recreation</td>
<td>1</td>
</tr>
<tr>
<td>PEP A183</td>
<td>Wellness Principles</td>
<td>1</td>
</tr>
<tr>
<td>PEP A184</td>
<td>Fundamental Motor Skills</td>
<td>1</td>
</tr>
</tbody>
</table>
PEP A280  Leadership in Health, Physical Education and Recreation  3
PEP A281  Leadership in Activities for Diverse Populations  2
PEP A282  Leadership in Initiative Activities  2
PEP A284  Leadership in Fitness Activities  2
PEP A382  Kinesiology and Biomechanics  4
PEP A383  Movement Theory and Motor Development  3
PEP A384  Cultural and Psychological Aspects of Health and Physical Activity  3
PEP A385  Physiology of Exercise  4
PEP A486  Standards and Assessment in Health, Physical Education, and Recreation  3
PEP A487  Administration and Supervision in Health, Physical Education and Recreation  3
Complete two from:
PEP A283  Leadership in Aquatic Activities  2
PEP A285  Leadership in Team Activities  2
PEP A286  Leadership in Individual and Dual Activities  2
PEP A287  Leadership in Outdoor Recreation Activities  2
PEP A288  Leadership in Rhythmic Activities  2

2. Complete one of the following emphasis areas:

**Health and Fitness Leadership (43 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA A151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BA A231</td>
<td>Fundamentals of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BA A260</td>
<td>Marketing Practices</td>
<td>3</td>
</tr>
<tr>
<td>HS/NS A433</td>
<td>Health Education: Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>PEP A251</td>
<td>Prevention and Care of Activity-Related Injuries</td>
<td>3</td>
</tr>
<tr>
<td>PEP A453</td>
<td>Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>PEP A454</td>
<td>Exercise Testing and Prescription</td>
<td>4</td>
</tr>
<tr>
<td>PEP A455</td>
<td>Cardiac Rehabilitation and Special Populations</td>
<td>4</td>
</tr>
<tr>
<td>PEP A456</td>
<td>Contemporary Personal Health Issues</td>
<td>3</td>
</tr>
<tr>
<td>PEP A495</td>
<td>Internship in Health and Fitness Leadership</td>
<td>6</td>
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</table>

**Electives**  8

**Exercise Management Option (20 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA A231</td>
<td>Fundamentals of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BA A260</td>
<td>Marketing Practices</td>
<td>3</td>
</tr>
<tr>
<td>HS/NS A433</td>
<td>Health Education: Theory and Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

**Exercise and Rehabilitation Sciences Option (20 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEP A490</td>
<td>Special Topics in Health, Physical Education and Recreation (3)</td>
<td></td>
</tr>
<tr>
<td>PEP A453</td>
<td>Health Promotion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**  8
PEP A346 Lower Body Injury Assessment Skills 3
PEP A347 Upper Body Injury Assessment Skills 3
Science and Rehabilitation Core 14
Complete courses from at least two of the following prefixes in consultation with the faculty advisor:
BIOL, CHEM, DN, PEP, PHYS, PSY

Outdoor Leadership and Administration (43 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA A151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>ENVI A303</td>
<td>Environmental Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PEP A262</td>
<td>Foundations of Outdoor Recreation</td>
<td>3</td>
</tr>
<tr>
<td>PEP A264</td>
<td>Recreation Program Planning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>PEP A363</td>
<td>Natural History Interpretation and Environmental Education</td>
<td>3</td>
</tr>
<tr>
<td>PEP A365</td>
<td>Outdoor Leadership Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>PEP A464</td>
<td>Outdoor Recreation Administration</td>
<td>3</td>
</tr>
<tr>
<td>PEP A467C</td>
<td>Land-Based Outdoor Leadership</td>
<td>2</td>
</tr>
<tr>
<td>PEP A467D</td>
<td>Water-Based Outdoor Leadership</td>
<td>2</td>
</tr>
<tr>
<td>PEP A496</td>
<td>Internship in Outdoor Leadership</td>
<td>6</td>
</tr>
<tr>
<td>PER A169</td>
<td>Four-Season Backpacking</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Choose a minimum of 6 credits from the following:</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>PER A146</td>
<td>Beginning Rock Climbing (1)</td>
<td></td>
</tr>
<tr>
<td>PER A147</td>
<td>Beginning Ice Climbing (1)</td>
<td></td>
</tr>
<tr>
<td>PER A148</td>
<td>Beginning Indoor Sport Climbing I (1)</td>
<td></td>
</tr>
<tr>
<td>PER A150</td>
<td>Water Safety and Rescue (1)</td>
<td></td>
</tr>
<tr>
<td>PER A151</td>
<td>Beginning Canoeing (1)</td>
<td></td>
</tr>
<tr>
<td>PER A152</td>
<td>Beginning River Rafting (1)</td>
<td></td>
</tr>
<tr>
<td>PER A153</td>
<td>Beginning Sea Kayaking (1)</td>
<td></td>
</tr>
<tr>
<td>PER A164</td>
<td>Skiing Alaska's Backcountry (2)</td>
<td></td>
</tr>
<tr>
<td>PER A165</td>
<td>Avalanche Hazard Recognition and Evaluation (1)</td>
<td></td>
</tr>
<tr>
<td>PER A181</td>
<td>Crevasse Rescue Techniques (1)</td>
<td></td>
</tr>
<tr>
<td>PER A246</td>
<td>Intermediate Rock Climbing (2)</td>
<td></td>
</tr>
<tr>
<td>PER A252</td>
<td>Intermediate River Rafting (2)</td>
<td></td>
</tr>
<tr>
<td>PER A253</td>
<td>Intermediate Sea Kayaking (2)</td>
<td></td>
</tr>
</tbody>
</table>

Choose a minimum of 6 credits from the following:

3. A minimum of 120 credits is required for the degree of which 42 credits must be upper division.

Other requirements: Pass a swim test and possess Current Wilderness First Responder Certification from a recognized institution at time of completion

Recommended Course Sequence

See a Health, Physical Education and Recreation advisor for information on a recommended course sequence.

Minor, Athletic Training

Students who wish to minor in Athletic Training must complete the following requirements. A minimum of 23 credits, including 14 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in PEP A346 and PEP A347.
1. Complete the following requirements (20-23 credits):

- DN A203 Nutrition for Health Sciences (3)
- DN A215 Sports Nutrition (3)
- MA A101 Medical Terminology (3)
- PEP A251 Prevention and Care of Activity-Related Injuries (3)
- PEP A366 Lower Body Injury Assessment Skills (3)
- PEP A367 Upper Body Injury Assessment Skills (3)
- PEP A382 Kinesiology and Biomechanics (4)
- PEP A385 Physiology of Exercise (4)

**Minor, Coaching**

Students who wish to minor in Coaching must complete the following requirements. A minimum of 22 credits, including 10 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in PEP A130 and sport specific coaching course.

1. Complete the following core courses (20 credits):

- PEP A130 Introduction to Coaching (3)
- PEP A230 Sport Ethics (1)
- PEP A231 Drugs and Sport (1)
- PEP A235 Prevention and Care of Activity-Related Injuries (3)
- PEP A281 Leadership in Activities for Diverse Populations (3)
- PEP A383 Movement Theory and Motor Development (3)
- PEP A384 Cultural and Psychological Aspects of Health and Physical Activity (3)
- PEP A385 Physiology of Exercise (4)

2. Choose one of the following:

- PEP A233 Coaching Track and Field and Running (2)
- PEP A234 Coaching Wrestling (2)
- PEP A235 Coaching Swimming and Diving (2)
- PEP A236 Coaching Skiing (2)
- PEP A237 Coaching Figure Skating (2)
- PEP A238 Coaching Gymnastics (2)
- PEP A239 Coaching Baseball/Softball (2)
- PEP A240 Coaching Football (2)
- PEP A241 Coaching Basketball (2)
- PEP A242 Coaching Soccer (2)
- PEP A243 Coaching Hockey (2)
- PEP A244 Coaching Volleyball (2)

**Minor, Health and Fitness Leadership***

Students who wish to minor in Health and Fitness Leadership must complete the following requirements. A minimum of 27 credits, including 6 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. A minimum grade of C or better is required in the courses within the option.

1. Complete the following core courses (24 credits):
BIOL A111/L Human Anatomy and Physiology I with Laboratory 4
BIOL A112/L Human Anatomy and Physiology II with Laboratory 4
DN A203 Nutrition for Health Sciences (3) 3
or
DN A215 Sports Nutrition (3)
PEP A115 Fitness Leadership/Group Fitness and Personal Training 3
PEP A385 Physiology of Exercise 4
PEP A442 Exercise and Aging 3
PEP A453 Health Promotion 3
2. Choose one of the following options: 3-4

**Fitness Instruction Option (3 credits)**
PEP A116 Techniques in Group Fitness Instruction 2
PER activity course related to specialty 1

**Personal Training Option (3 credits)**
PEP A117 Techniques in Personal Training 2
PER A118 Beginning Weight Training 1

**Wellness Option (4 credits)**
PEP A116 Techniques in Group Fitness Instruction 2
PEP A117 Techniques in Personal Training 2

3. A minimum of 27 credits is required for this minor.
   *Not available to Physical Education majors with Health and Fitness Leadership emphasis.

**Minor, Outdoor Leadership**

Students who wish to minor in Outdoor Leadership must complete the following requirements. A minimum of 22 credits, including 7 upper division credits are required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of B or better in PEP A467C or PEP A467D.

1. Complete the following core courses (16 credits)
   PEP A262 Foundations of Outdoor Recreation 3
   PEP A264 Recreation Program Planning and Evaluation 3
   PEP A365 Outdoor Leadership Theory and Practice 3
   PEP A467C Land-Based Outdoor Leadership 2
   PEP A467D Water-Based Outdoor Leadership 2
   PER A169 Four-Season Backpacking 3

2. Choose a minimum of three (3) credits from the following: 3
   PER A150 Water Safety and Rescue (1)
   PER A151 Beginning Canoeing (1)
   PER A152 Beginning River Rafting (1)
   PER A153 Beginning Sea Kayaking (1)
   PER A252 Intermediate River Rafting (2)
   PER A253 Intermediate Sea Kayaking (2)

3. Choose a minimum of three (3) credits from the following: 3
4. A minimum of 22 credits is required for this minor.

**Other requirements:** Pass a swimming test and possess current certification in First Aid and CPR

*Not available to Physical Education majors with Outdoor Leadership and Administration emphasis

## Minor, Physical Education *

Students who wish to minor in Physical Education must complete the following requirements. A total of 30 credits, including 10 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in the leadership courses.

1. Complete the following core courses (15 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL A111</td>
<td>Human Anatomy and Physiology I with Laboratory</td>
</tr>
<tr>
<td>BIOL A112</td>
<td>Human Anatomy and Physiology II with Laboratory</td>
</tr>
<tr>
<td>PEP A181</td>
<td>Introduction to Health, Physical Education and Recreation</td>
</tr>
<tr>
<td>PEP A182</td>
<td>Technology in Health, Physical Education and Recreation</td>
</tr>
<tr>
<td>PEP A183</td>
<td>Wellness Principles</td>
</tr>
<tr>
<td>PEP A184</td>
<td>Fundamental Motor Skills</td>
</tr>
<tr>
<td>PEP A280</td>
<td>Leadership in Health, Physical Education and Recreation</td>
</tr>
<tr>
<td>PEP A281</td>
<td>Leadership in Activities for Diverse Populations</td>
</tr>
<tr>
<td>PEP A282</td>
<td>Kinesiology and Biomechanics</td>
</tr>
<tr>
<td>PEP A283</td>
<td>Movement Theory and Motor Development</td>
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</table>

2. Choose two of the following: 4 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PEP A282</td>
<td>Leadership in Initiative Activities (2)</td>
</tr>
<tr>
<td>PEP A283</td>
<td>Leadership in Aquatic Activities (2)</td>
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<tr>
<td>PEP A284</td>
<td>Leadership in Fitness Activities (2)</td>
</tr>
<tr>
<td>PEP A285</td>
<td>Leadership in Team Activities (2)</td>
</tr>
<tr>
<td>PEP A286</td>
<td>Leadership in Individual and Dual Activities (2)</td>
</tr>
<tr>
<td>PEP A287</td>
<td>Leadership in Outdoor Recreation Activities (2)</td>
</tr>
<tr>
<td>PEP A288</td>
<td>Leadership in Rhythmic Activities (2)</td>
</tr>
</tbody>
</table>

*Not available to Physical Education majors.*

---

**FACULTY**

Sandra Carroll-Cobb, Director/Associate Professor, AFSC@uaa.alaska.edu
Michael Chriss, Assistant Professor, AFMC1@uaa.alaska.edu
Timothy Miller, Assistant Professor, ANTJM2@uaa.alaska.edu
### Course Action Request

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Course**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB CBPP</td>
<td>ADBP</td>
<td>BA</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
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<tbody>
<tr>
<td>BA</td>
<td>A166</td>
<td>N/A</td>
<td>3</td>
<td>(3+0)</td>
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<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Business Management</strong></td>
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Abbreviated Title for Transcript (30 character): 

<table>
<thead>
<tr>
<th>7. Type of Course</th>
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<tbody>
<tr>
<td>☑ Academic</td>
</tr>
<tr>
<td>☐ Preparatory/Development</td>
</tr>
<tr>
<td>☐ Non-credit</td>
</tr>
<tr>
<td>☐ CEU</td>
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<td>☐ Professional Development</td>
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<table>
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<tr>
<th>8. Type of Action:</th>
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<tbody>
<tr>
<td>☑ Add</td>
</tr>
<tr>
<td>☐ Change</td>
</tr>
<tr>
<td>☐ Delete</td>
</tr>
</tbody>
</table>

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Contact Hours
- ☐ Title
- ☐ Repeat Status
- ☐ Grading Basis
- ☐ Cross-Listed/Stacked
- ☐ Course Description
- ☐ Course Prerequisites
- ☐ Test Score Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☐ Other Restrictions
- ☐ Class
- ☐ Level
- ☐ College
- ☐ Major
- ☐ Other Update CCG (please specify)

<table>
<thead>
<tr>
<th>9. Repeat Status No</th>
<th># of Repeats</th>
<th>Max Credits</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>10. Grading Basis</th>
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<tbody>
<tr>
<td>☑ A-F</td>
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<td>☐ P/NP</td>
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<td>semester/year</td>
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<td>To:</td>
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<th>12. Cross Listed with</th>
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<tbody>
<tr>
<td>☐ Stacked with</td>
</tr>
</tbody>
</table>

Cross-Listed Coordination Signature: 

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### 13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See attached</td>
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<td>2.</td>
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<td>3.</td>
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<td></td>
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</table>

Initiator Name (typed): Gary Selk  
Initiator Signed Initials: _________ Date: __________

---

### 13b. Coordination Email

Date: 02/01/2013

submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

---

### 13c. Coordination with Library Liaison

Date: 02/01/2013

---

### 14. General Education Requirement

Mark appropriate box:

- ☐ Oral Communication
- ☐ Written Communication
- ☐ Quantitative Skills
- ☐ Humanities
- ☐ Fine Arts
- ☐ Social Sciences
- ☐ Natural Sciences
- ☐ Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)

Business planning as a key to successful small business management. Examines practical aspects of management for starting and operating a small business. Assists students in furthering their understanding of personal finance, business planning, marketing, production, and business finance.

### 16a. Course Prerequisite(s) (list prefix and number)

N/A

### 16b. Test Score(s)

N/A

### 16c. Co-requisite(s) (concurrent enrollment required)

N/A

### 16d. Other Restriction(s)

- ☐ College
- ☐ Major
- ☐ Class
- ☐ Level

### 16e. Registration Restriction(s) (non-codable)

N/A

### 17. Mark if course has fees Standard CBPP computer lab fee

- ☑

### 18. Mark if course is a selected topic course

- ☐

### 19. Justification for Action

To update the outline, textbook, and bibliography

---

Initiator (faculty only)

Gary Selk

Initiator (TYPE NAME)

Approved

Disapproved

Dean/Director of School/College

Date

---

Approved

Disapproved

Undergraduate/Graduate Academic

Date

Approved

Disapproved

Board Chairperson

Date

Approved

Disapproved

provost or Designee

Date
13a. Impacted courses or programs BA A166

<table>
<thead>
<tr>
<th>Impacted program/course</th>
<th>Catalog page(s)</th>
<th>Date of coordination</th>
<th>Chair/Coordinator contacted</th>
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<tbody>
<tr>
<td>Digital Art, Digital Photography Concentration, AAS</td>
<td>97</td>
<td>02/01/2013</td>
<td>Celia Anderson</td>
</tr>
<tr>
<td>Digital Art, Darkroom/Digital Concentration, AAS</td>
<td>98</td>
<td>02/01/2013</td>
<td>Celia Anderson</td>
</tr>
<tr>
<td>Small Business Management, Undergraduate Certificate</td>
<td>137</td>
<td>02/01/2013</td>
<td>Steve Horn</td>
</tr>
<tr>
<td>Small Business Management, AAS</td>
<td>139</td>
<td>02/01/2013</td>
<td>Ed Forrest</td>
</tr>
</tbody>
</table>
I. Date Initiated  
February 11, 2013

II. Course Information  
College/School: College of Business and Public Policy  
Department: Business Administration  
Program: Associate of Applied Science, Small Business Administration;  
Associate of Applied Science, Digital Art, Digital Photography Concentration;  
Associate of Applied Science, Digital Art, Darkroom/Digital Concentration  
Course Title: Small Business Management  
Course Number: BA A166  
Credits: 3  
Contact Hours: 3 per week x 15 weeks = 45 hours  
0 lab hours  
6 hours outside of class per week x 15 weeks = 90 hours  
Grading Basis: A - F  
Course Description: Business planning as a key to successful small business management. Examines practical aspects of management for starting and operating a small business. Assists students in furthering their understanding of personal finance, business planning, marketing, production, and business finance.  
Course Prerequisites: N/A  
Registration Restrictions: N/A  
Fees: Standard CBPP computer lab fee

III. Course Activities  
A. Lectures and discussions  
B. In-class exercises  
C. Guest speakers  
D. Research projects

IV. Course Level Justification  
This is a 100-level course that examines the basic principles of starting/operating a small business

V. Outline  
A. The Dynamic Role of Small Business  
1. Starting your small business  
2. Family owned businesses  
3. Forms of ownership
B. How to Plan and Organize a Business  
   1. Planning, organizing, and managing a small business  
   2. How to obtain the right financing for your business  

C. How to Market Goods and Services  
   1. Developing marketing strategies  
   2. Promotion and distribution  

D. How to Organize and Manage the Business  
   1. Human resources  
   2. How to maintain relationships with your employees  

E. How to Operate the Business  
   1. Facility layout  
   2. Purchasing and Inventory Control  

F. Basic Financial Management  
   1. Profit planning  
   2. Budgeting, controlling operations, and taxes  

G. Providing Security for the Business  
   1. Risk management  
   2. Insurance  
   3. Crime prevention  

VI. Suggested Text  


VII. Bibliography  

### VIII. Instructional Goals and Student Learning Outcomes

#### A. Instructional Goals.

**The instructor will:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Present an overview of small business management.</td>
</tr>
<tr>
<td>2.</td>
<td>Explain the value of ethical decision making and social responsibilities of small business ownership.</td>
</tr>
<tr>
<td>3.</td>
<td>Explain the various forms of business planning.</td>
</tr>
<tr>
<td>4.</td>
<td>Discuss business failure and explain ways to recognize and avoid common pitfalls.</td>
</tr>
<tr>
<td>5.</td>
<td>Explain how to write a comprehensive business plan</td>
</tr>
<tr>
<td>6.</td>
<td>Discuss human resource management.</td>
</tr>
<tr>
<td>7.</td>
<td>Discuss marketing requirements of small business ownership.</td>
</tr>
<tr>
<td>8.</td>
<td>Explain how to analyze various key financial statements.</td>
</tr>
<tr>
<td>9.</td>
<td>Explain how to calculate break-even.</td>
</tr>
<tr>
<td>10.</td>
<td>Explain how to forecast sales and the importance of cash-flow analysis.</td>
</tr>
</tbody>
</table>

#### B. Student Learning Outcomes.

**Students will be able to:**

<table>
<thead>
<tr>
<th></th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate ethical decision making</td>
<td>In-class exercise and quiz</td>
</tr>
<tr>
<td>2. Demonstrate working knowledge of various functions of small business ownership</td>
<td>Research project</td>
</tr>
<tr>
<td>3. Describe common pitfalls and how to avoid them, describe the various functions of human resource management</td>
<td>Quizzes, homework and exam</td>
</tr>
<tr>
<td>4. Demonstrate knowledge of sales forecasting, cash-flow analysis, and break-even</td>
<td>Quizzes and exam</td>
</tr>
<tr>
<td>5. Explain the difference between insurable risk and uninsurable risk and discuss how to control risk</td>
<td>Quizzes and exam</td>
</tr>
</tbody>
</table>
1a. School or College
CB CBPP

1b. Division
ADBP Division of Business Programs

1c. Department
BA

2. Course Prefix
BA

3. Course Number
A480

4. Previous Course Prefix & Number
N/A

5a. Credits/CEUs
3

5b. Contact Hours
(Lecture + Lab)
(3+0)

6. Complete Course Title
Social Media Marketing

7. Type of Course
☒ Academic
☐ Preparatory/Development
☐ Non-credit
☐ CEU
☐ Professional Development

8. Type of Action:
☐ Add
☒ Change
☐ Delete

If a change, mark appropriate boxes:
☐ Prefix
☐ Credits
☐ Title
☐ Grading Basis
☐ Course Description
☐ Test Score Prerequisites
☐ Other Restrictions
☐ Other (please specify)

9. Repeat Status No
☐ Add
☒ Change
☐ Delete

If a change, mark appropriate boxes:
☐ Course Number
☐ Contact Hours
☐ Repeat Status
☐ Cross-Listed/Stacked
☐ Co-requisites
☐ Registration Restrictions
☐ Class
☐ Level
☐ College
☐ Major
☐ Other

10. Grading Basis
☒ A-F
☐ P/NP
☐ NG

11. Implementation Date
From: Fall/2013
To: /9999

12. ☐ Cross Listed with
☒ Stacked with
☐ BA A680

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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<tr>
<th>Impacted Program/Course</th>
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<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tbody>
<tr>
<td>1. Master of Business Administration</td>
<td>Courtesy Coordination</td>
<td>01/30/13</td>
<td>Ed Forrest</td>
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</table>

Initiator Name (typed): Mei Rose
Initiator Signed Initials: ____________ Date: ____________

13b. Coordination Email
Date: 02/01/13
submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 02/01/13

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication
☐ Written Communication
☐ Quantitative Skills
☐ Social Sciences
☐ Natural Sciences
☐ Humanities
☐ Fine Arts
☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Introduces students to the field of social media marketing. Surveys social media marketing processes, platforms, and purposes. Reviews how social media tools can be utilized for valuable insights into consumers’ attitudes toward the company and its competitors’ brands.

16a. Course Prerequisite(s) (list prefix and number)
None

16b. Test Score(s)
N/A

16c. Co-requisite(s) (concurrent enrollment required)
N/A

16d. Other Restriction(s)
☐ College
☐ Major
☐ Class
☐ Level

16e. Registration Restriction(s) (non-codable)
CBPP majors must be admitted to upper-division standing

17. ☒ Mark if course has fees
Standard CBPP computer lab fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action
To ensure CBPP's ability to offer this vital body of knowledge, essential and requisite to all marketing students' success, on a regular basis
<table>
<thead>
<tr>
<th>Initiator (faculty only)</th>
<th>Date</th>
<th>Dean/Director of School/College</th>
<th>Date</th>
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<tbody>
<tr>
<td>Mei Rose</td>
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<td>Initiator (TYPE NAME)</td>
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- [ ] Approved
- [ ] Disapproved

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<th>Department Chairperson</th>
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<th>Provost or Designee</th>
<th>Date</th>
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56
I. Date Initiated
   February 11, 2013

II. Course Information
   College/School: College of Business and Public Policy
   Department: Business Administration
   Program: Bachelor of Business Administration
   Course Title: Social Media Marketing
   Course Number: BA A480
   Credits: 3
   Contact Hours: 3 per week x 15 weeks = 45 hours
                 0 lab hours
                 6 hours outside of class per week x 15 weeks = 90 hours
   Grading Basis: A-F
   Course Description: Introduces students to the field of social media marketing. Surveys social media marketing processes, platforms, and purposes. Reviews how social media tools can be utilized for valuable insights into consumers’ attitudes toward the company and its competitors’ brands.
   Course Prerequisites: None
   Registration Restrictions: CBPP majors must be admitted to upper-division standing.
   Fees: Standard CBPP computer lab fee

III. Course Activities
   A. Lectures
   B. Guest presenters
   C. Group work

IV. Course Level Justification
   Students need a substantial body of lower-level courses to complete this course. BA A480 requires students to develop a clear understanding of social media marketing from a theoretical and practical point of view. The course also requires students to demonstrate understanding of social media marketing through written essays and oral discourse.
V. Outline

A. Why Social Media?
B. Goals and Strategies
C. Identifying Target Audiences
D. Rules of Engagement for Social Media
E. Publishing Blogs
F. Publishing Podcasts and Webinars
G. Publishing Articles, White Papers and E-Books
H. Sharing Videos
I. Sharing Photos and Images
J. Social Networks
K. Microblogging
L. Discussion Boards, Social News Sites, and Q&A Sites
M. Mobile Computing and Location Marketing
N. Social Media Monitoring Tools

VI. Suggested Text


VII. Bibliography


VIII. Instructional Goals and Student Learning Outcomes

A. Instructional Goals.
   The instructor will:
   
   1. Present information and theory of social media marketing covering the principal concepts and applications of effective social media marketing practices.
   2. Facilitate case and article discussions to demonstrate successful and unsuccessful application of social marketing tactics and tools.
   3. Develop students’ understanding of effective social media contents and the use of appropriate media platform and tools to disseminate the contents.
   4. Provide written feedback regarding all written work such examinations, and research reports.

B. Student Learning Outcomes.
   Students will be able to:

<table>
<thead>
<tr>
<th>Students will be able to:</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the social media marketing ecosystem and its impact on traditional marketing strategy.</td>
<td>Examinations and presentations</td>
</tr>
<tr>
<td>2. Select appropriate social media tools and platforms to engage consumers, and monitor and measure the results of these efforts.</td>
<td>Research project and presentations</td>
</tr>
<tr>
<td>3. Describe consumers’ digital media behavior and their attitudes toward a company and its competitors’ brands.</td>
<td>Examinations and presentations</td>
</tr>
<tr>
<td>4. Explain the best marketing practices for paid and unpaid social media.</td>
<td>Examinations and presentations</td>
</tr>
</tbody>
</table>
Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College  
CB CBPP

1b. Division  
ADBP Division of Business Programs

1c. Department  
BA

2. Course Prefix  
BA

3. Course Number  
A680

4. Previous Course Prefix & Number  
N/A

5a. Credits/CEUs  
3

5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Social Media Strategies

Abbreviated Title for Transcript (30 character)

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☐ Add  or  ☒ Change  or  ☐ Delete

If a change, mark appropriate boxes:

☐ Prefix  ☐ Course Number  ☐ Contact Hours  ☐ Grading Basis  ☐ Title  ☐ Repeat Status  ☐ Cross-Listed/Stacked  ☐ Course Description  ☐ Course Prerequisites  ☐ Undergraduate  ☐ Registration Restrictions  ☒ Class  ☒ Level  ☐ College  ☐ Major  ☐ Other Update CCG (please specify)

9. Repeat Status No  
# of Repeats  
Max Credits

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
semester/year  
From: Fall/2013  
To: /9999

12.  
☐ Cross Listed with  
☐ Stacked with  
BA A480

Cross-Listed Coordination

Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

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<tbody>
<tr>
<td>1. Marketing, BBA</td>
<td>Courtesy Coordination</td>
<td>01/30/13</td>
<td>Ed Forrest</td>
</tr>
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<td>2.</td>
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Initiator Name (typed): Mei Rose
Initiator Signed Initials: _________  Date: ________________

13b. Coordination Email  
Date: 1/30/13  
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 01/30/13

14. General Education Requirement  
Mark appropriate box:
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
Provides strategic knowledge and insights into the field of social media marketing. Analyzes social media strategies: processes, platforms, and purposes to gain valuable insights into consumers’ attitudes toward the company and its competitors’ brands. Provides tools for developing social media marketing plans.

16a. Course Prerequisite(s) (list prefix and number)  
None

16b. Test Score(s)  
N/A

16c. Co-requisite(s) (concurrent enrollment required)  
N/A

16d. Other Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☒ Level

16e. Registration Restriction(s) (non-codable)  
Graduate standing

17. ☒ Mark if course has fees  
Standard CBPP computer lab fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
To revise the CCG outline and to ensure CBPP's ability to offer this vital body of knowledge, essential and requisite to all marketing students’ success, on a regular basis.
<table>
<thead>
<tr>
<th>Role</th>
<th>Approved</th>
<th>Disapproved</th>
<th>Date</th>
</tr>
</thead>
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<td>Initiator (faculty only)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mei Rose</td>
<td></td>
<td></td>
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<tr>
<td>Initiator (TYPE NAME)</td>
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<tr>
<td>Dean/Director of School/College</td>
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<tr>
<td>Department Chairperson</td>
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<td></td>
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<tr>
<td>Provost or Designee</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I. Date Initiated
   February 11, 2013

II. Course Information
   College/School: College of Business and Public Policy
   Department: Business Administration
   Program: Master of Business Administration
   Course Title: Social Media Strategies
   Course Number: BA A680
   Credits: 3
   Contact Hours: 3 per week x 15 weeks = 45 hours
     0 lab hours
     6 hours outside of class per week x 15 weeks = 90 hours
   Grading Basis: A-F
   Course Description: Provides strategic knowledge and insights into the field of
     social media marketing. Analyzes social media strategies: processes, platforms,
     and purposes to gain valuable insights into consumers’ attitudes toward the
     company and its competitors’ brands. Provides tools for developing social media
     marketing plans.
   Course Prerequisites: None
   Registration Restrictions: Graduate standing
   Fees: Standard CBPP computer lab fee

III. Course Activities
   A. Lecture
   B. Discussion
   C. Guest presenters
   D. Group work

IV. Course Level Justification
   The course requires an undergraduate degree and admission into the MBA program.
   BA A680 demands rigorous synthesis, analysis, and research skills whereby students
   develop a social media marketing plan that necessitates use of appropriate social
   media tools and platforms.

V. Outline
   A. What Is Social Media
   B. Goals and Strategies
      1. Analyze your existing media.
      2. The social media trinity.
      3. Integrate strategies.
      4. Identify resources.
C. Identifying Target Audiences
D. Social Media Tactics and Tools
   5. How to social network
   6. What to publish
   7. E-mail and web pages methods.
   8. The internet forum, ubiquitous blog and wiki.
   9. How to share photos
   10. Creating and sharing audio for podcast.
   11. Video sharing and vlogs.
   12. Microblogging and livecasting methods.
   13. Virtual worlds and virtual gaming.
   14. RSS—really simple syndication made simple.
   15. Search engine optimization (SEO).
   16. Mobile marketing.
E. Implement and Measurement.
F. Social Media Marketing Plan

VI. Suggested Text


VII. Bibliography


VIII. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The instructor will:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Present strategies and theory of social media marketing covering the principal concepts and applications of social media marketing</td>
<td></td>
</tr>
<tr>
<td>2. Facilitate case and article discussions demonstrating successful and unsuccessful application of social marketing strategies</td>
<td></td>
</tr>
<tr>
<td>3. Develop students’ ability to utilize effective social media marketing strategies by developing a social media marketing plan</td>
<td></td>
</tr>
<tr>
<td>4. Help students learn to formulate social media contents, and use the appropriate media platform and tools to disseminate the contents</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Student Learning Outcomes.</strong></td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>1.</td>
<td>Describe the social media marketing ecosystem and its impact on traditional marketing strategy</td>
</tr>
<tr>
<td>2.</td>
<td>Develop strategies for a social media marketing plan</td>
</tr>
<tr>
<td>3.</td>
<td>Select appropriate social media tools and platforms to engage consumers, and monitor and measure the results of these efforts.</td>
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<td>4.</td>
<td>Discuss consumers’ digital media behavior and their attitude toward a company and its competitors’ brands.</td>
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<tr>
<td>5.</td>
<td>Describe the best marketing strategies for paid and unpaid social media</td>
</tr>
<tr>
<td>6.</td>
<td>Demonstrate competence in developing communication contents using social media tools</td>
</tr>
</tbody>
</table>
**Course Action Request**

**University of Alaska Anchorage**

Proposal to Initiate, Add, Change, or Delete a Course

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB CBPP</td>
<td>ADBP Division of Business Programs</td>
<td>ACCT</td>
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<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours</th>
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<table>
<thead>
<tr>
<th>6. Complete Course Title</th>
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<tr>
<td>Advanced Accounting Internship</td>
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**Abbreviated Title for Transcript (30 character)**

<table>
<thead>
<tr>
<th>7. Type of Course</th>
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<tbody>
<tr>
<td>☒ Academic</td>
</tr>
<tr>
<td>☐ Preparatory/Development</td>
</tr>
<tr>
<td>☐ Non-credit</td>
</tr>
<tr>
<td>☐ CEU</td>
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<td>☐ Professional Development</td>
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<tbody>
<tr>
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</tr>
<tr>
<td>☒ Change</td>
</tr>
<tr>
<td>☐ Delete</td>
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</tbody>
</table>

If a change, mark appropriate boxes:

- Prefix
- Credits
- Title
- Grading Basis
- Course Description
- Test Score Prerequisites
- Other Restrictions
- College
- Major
- Class
- Level
- Repeat Status
- Contact Hours
- Cross-Listed/Stacked
- Co-requisites
- Registration Restrictions
- Other CCG (please specify)

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<tr>
<td>☑ P/NP</td>
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<th>13a. Impacted Courses or Programs:</th>
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<tbody>
<tr>
<td>List any programs or college requirements that require this course.</td>
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<tr>
<td>Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at <a href="http://www.uaa.alaska.edu/governance">www.uaa.alaska.edu/governance</a>.</td>
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Initiator Name (typed): Lynn Koshiyama  
Initiator Signed Initials: _________  
Date: __________________

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13c. Coordination with Library Liaison  
Date: 11/05/2012

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<td>☐ Fine Arts</td>
</tr>
<tr>
<td>☐ Social Sciences</td>
</tr>
<tr>
<td>☐ Natural Sciences</td>
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<tr>
<td>☐ Integrative Capstone</td>
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15. Course Description (suggested length 20 to 50 words)

Integrates classroom study with work experience in an approved accounting position with supervision and training in the public and/or private sectors.

Special Notes: May not be used to satisfy upper-division accounting elective requirement. May be repeated for credit but only 6 credits will apply to degree requirements.

16a. Course Prerequisite(s) (list prefix and number)  
ACCT A301 with a minimum grade of C

16b. Test Score(s)  
N/A

16c. Co-requisite(s) (concurrent enrollment required)  
N/A

16d. Other Restriction(s)  
☐ College  
☐ Major  
☐ Class  
☐ Level

16e. Registration Restriction(s) (non-codable)  
Must be admitted to the BBA Accounting Program; Permission of College of Business and Public Policy Accounting Faculty Internship Coordinator; upper-division standing; Cumulative GPA of 2.75 or higher; 3.0 GPA in major.

17. ☒ Mark if course has fees Standard CBPP lab fee and standard Career Services Center (CSC) Internship fee

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Updated registration restrictions, bibliography, and student learning outcomes.
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I. Date Initiated: February 11, 2013

II. Course Action Request Information
College/School: College of Business and Public Policy
Department: Accounting
Program: BBA, Accounting
Course Title: Advanced Accounting Internship
Course Number: ACCT A495
Credits: 3
Contact Hours: 225 contact hours of employment are required. Hours per week will vary between 10 – 20 hours depending on employer’s needs and student’s class schedule. Summer hours may exceed 20 hours per week.
Grading Basis: Pass/No Pass
Course Description: Integrates classroom study with work experience in an approved accounting position with supervision and training in the public and/or private sectors. Special Notes: May not be used to satisfy upper-division accounting elective requirement. May be repeated for credit but only 6 credits will apply to degree requirements.
Course Prerequisites: ACCT A301 with a minimum grade of C
Registration Restrictions: Must be admitted to the BBA Accounting Program; Permission of College of Business and Public Policy Accounting Faculty Internship Coordinator; upper-division standing; Cumulative GPA of 2.75 or higher; 3.0 GPA in major.
Fees: Standard CBPP lab fee and standard Career Services Center (CSC) Internship fee

III. Course Activities
A. Work experience in an approved position with supervision and training in various phases of accounting.
B. Specific activities are developed and approved by employer, Accounting Faculty Internship Coordinator, student, and Career Services Center Internship Coordinator.
C. Each internship must include a Learning Agreement which includes:
   1. Learning objectives to be accomplished
   2. How objectives will be accomplished
   3. How achievement of objectives will be evaluated
IV. Guidelines for Evaluation
   A. Final Written Report
   B. Employer evaluations
      1. Midway conference call and evaluation
      2. Final evaluation
   C. Completion of the required hours on the job: Students must work 75
      hours on the job for each credit hour.

V. Course Level Justification
   This internship requires advanced understanding of Generally Accepted
   Accounting Principles and the accounting cycle. Course has a 300-level
   prerequisite.

VI. Outline
   A. Overview of the Internship Program
      1. Clarify student's occupational interest
      2. Develop updated resume
      3. Meet with the Accounting Faculty Internship Coordinator and a
         Career Services Center representative
      4. Attend program orientation
   B. Interview Process and Selection
      1. Review proper interviewing technique
      2. Interview with the potential employer
   C. Training Goals and Learning Objectives
      1. Develop learning objectives with assistance of Career Services
         Center Internship Coordinator
      2. Meet with Accounting Faculty Internship Coordinator to review
         learning objectives for approval
   D. Student's participation in practical learning experience

VII. Suggested Texts
   None required

VIII. Bibliography

   Connecting learning and work - a call to action. (1996). Denver, CO:
   Education Commission of the States.

   of accounting internships on students' attitudes and perceptions. The


IX. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals. The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Meet with students and help them explore career and occupational interests.</td>
</tr>
<tr>
<td>2. Assist students in developing an updated resume.</td>
</tr>
<tr>
<td>3. Assist students in preparing for the student/employer interview.</td>
</tr>
<tr>
<td>4. With the Career Services Internship Coordinator and employer, assist in developing the learning objectives that include specific academic content.</td>
</tr>
<tr>
<td>5. Review learning objectives with student.</td>
</tr>
<tr>
<td>6. Support the student during the internship and help the student develop attitudes and work habits pertinent to successful job performance.</td>
</tr>
<tr>
<td>7. Meet with the CSC representative, employer, and student to discuss the student’s job performance.</td>
</tr>
<tr>
<td>8. Review and assess student’s written final report.</td>
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</table>

<table>
<thead>
<tr>
<th>B. Student Learning Outcomes. Students will be able to:</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate resume writing skills</td>
<td>Completed resume will be reviewed by CSC, Accounting Faculty Coordinator, and employer</td>
</tr>
<tr>
<td>2. Demonstrate job interviewing skills</td>
<td>Employer evaluations</td>
</tr>
<tr>
<td>3. Apply new business and accounting skills contingent on the business and position in which they are employed</td>
<td>Employer evaluations and student’s final written report</td>
</tr>
<tr>
<td>4. Develop attitudes and work habits pertinent to successful job performance</td>
<td>Employer evaluations and student’s final written report</td>
</tr>
<tr>
<td>5. Demonstrate insight into various potential career paths in accounting</td>
<td>Student’s final written report</td>
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</table>
### 1a. School or College
EN SOENGR

### 1b. Division
No Division Code

### 1c. Department
Computer Science & Engineering

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<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours</th>
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<td>CS A201</td>
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### 6. Complete Course Title
Computer Programming I

#### Abbreviated Title for Transcript (30 character)

<table>
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<tr>
<th>7. Type of Course</th>
<th>8. Type of Action:</th>
<th>9. Repeat Status No</th>
<th>10. Grading Basis</th>
<th>11. Implementation Date</th>
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<td>☑ Change or ☐ Delete</td>
<td>☐ Add or ☑ Change or ☐ Delete</td>
<td>☑ A-F or ☐ P/NP or ☐ NG</td>
<td>semester/year</td>
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### 12. Cross Listed with

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<tr>
<td>☐ Stacked with</td>
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</tbody>
</table>

### 13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
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### Initiator Name (typed): Frank Moore  
Initiator Signed Initials: __________  
Date: __________

### 13b. Coordination Email
Date: 12-10-2012  
submitted to Faculty Lister(s): (uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison
Date: 12-10-2012

### 14. General Education Requirement
Mark appropriate box:
- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Social Sciences
- Natural Sciences
- Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)
An introduction to object-oriented computer programming techniques and problem solving. This course covers basic syntax; sequential, branching, and iterative execution; objects, methods, inheritance, polymorphism, and encapsulation; arrays and linked lists; and recursion.

### 16a. Course Prerequisite(s)
(list prefix and number)  
(MATH A105 or concurrent enrollment in any MATH course for which MATH A105 is in the prerequisite chain) with minimum grade of C.

### 16b. Test Score(s)
n/a

### 16c. Co-requisite(s)
(concurrent enrollment required)  
n/a

### 16d. Other Restriction(s)
- ☑ College
- ☑ Major
- ☑ Class
- ☑ Level

### 16e. Registration Restriction(s)
(non-codable)  
n/a

### 17. Mark if course has fees
Yes

### 18. Mark if course is a selected topic course

### 19. Justification for Action
Revision to include a lab component and establish a course common to both the Computer Science and Computer Systems Engineering programs.

Initiator (faculty only)  
Frank Moore  
Initiator (TYPE NAME)  

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Date: __________

Date: __________

Date: __________

Date: __________
# Course Being Changed: CS A201

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<th>Program Impacts examples: requirement, selective, program credit total</th>
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<th>Type/Date of Notification</th>
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<td>John Lund</td>
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Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Computer Science and Engineering

I. Revision Date: December 10, 2012

II. Course Information
A. College: School of Engineering
B. Course Subject/Number: CSCE A201
C. Credits: 4
D. Contact Hours: (3 + 2) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 30 lab hours (2 contact lab hours/week x 15 weeks = 30) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 165 hours
E. Course Title: Computer Programming I
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: An introduction to object-oriented computer programming techniques and problem solving. This course covers basic syntax; sequential, branching, and iterative execution; objects, methods, inheritance, polymorphism, and encapsulation; arrays and linked lists; and recursion.
I. Course Prerequisites: (MATH A105 or concurrent enrollment in any MATH course for which MATH A105 is in the prerequisite chain) with minimum grade of C.
J. Fees: Yes
K. Cross-listed: No

III. Course Level Justification
This course is traditionally taught at the freshman or sophomore level.

IV. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Assist students in becoming conversant with the basic syntax of a current programming language.</td>
</tr>
<tr>
<td>2.</td>
<td>Demonstrate how to design, implement, test, debug, and verify the correct operation of computer programs in that language.</td>
</tr>
<tr>
<td>3.</td>
<td>Introduce students to the fundamental concepts of object-oriented programming.</td>
</tr>
<tr>
<td>4.</td>
<td>Develop each student’s ability to write object-oriented classes and class hierarchies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Student Learning Outcomes.</th>
<th>Students will be able to:</th>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Use an editor and compiler to create, compile,</td>
<td>Programming Projects</td>
</tr>
</tbody>
</table>
and run a computer program.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Manipulate primitive numeric values, including integer and floating-point types.</td>
</tr>
<tr>
<td>3.</td>
<td>Use arithmetic operators and understand the conventions for order of operations.</td>
</tr>
<tr>
<td>4.</td>
<td>Input, manipulate, and display strings and use string variables.</td>
</tr>
<tr>
<td>5.</td>
<td>Declare object-reference variables, construct objects, and call methods.</td>
</tr>
<tr>
<td>6.</td>
<td>Write selection and iteration statements to control the flow of execution in a program.</td>
</tr>
<tr>
<td>7.</td>
<td>Write class definitions, including instance variables, constructors, and methods.</td>
</tr>
<tr>
<td>8.</td>
<td>Define derived classes in an inheritance hierarchy.</td>
</tr>
<tr>
<td>9.</td>
<td>Declare and use parameters and return values in constructors and methods.</td>
</tr>
<tr>
<td>11.</td>
<td>Create and manipulate arrays and lists.</td>
</tr>
</tbody>
</table>

V. Guidelines for Evaluation
A. Exams
B. Programming Projects

VI. Topical Course Outline

A. Lecture
1. Introduction to programs, objects, and classes
2. Data types: integer, floating-point, string
3. Classes: instance variables, constructors, methods, method calls
4. Decisions: selection and iteration
5. Methods: parameters, return values, static methods, static variables
6. Inheritance: class hierarchies, inherited and overridden methods
7. Polymorphism
8. Arrays: array processing, multi-dimensional arrays, array lists, searching, sorting
9. Exceptions
10. Streams: text file input/output, binary file input/output
11. Recursion
12. Linked Lists: dynamic allocation, inner classes, insert, delete

B. Laboratory
Topics covered in the laboratory will closely follow the course schedule. At the beginning of each session, an instructor will describe techniques for designing, implementing, testing, and debugging programs similar to that week's programming
project. Each lab session will conclude with students doing hand-on programming while receiving one-on-one assistance from the instructor.

VII. **Suggested Texts**


VIII. **Bibliography**


## Course Action Request

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Course**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN SOENGR</td>
<td>No Division Code</td>
<td>Computer Science and Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE</td>
<td>A202</td>
<td>CS A202</td>
<td>3</td>
<td>(3+0)</td>
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</table>

### 6. Complete Course Title

Object-Oriented Programming

Abbreviated Title for Transcript (30 character)

### 7. Type of Course

- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

### 8. Type of Action:

- [x] Add
- [ ] Change
- [ ] Delete

If a change, mark appropriate boxes:

- [x] Prefix
- [ ] Credits
- [x] Title
- [ ] Grading Basis
- [ ] Course Description
- [ ] Test Score Prerequisites
- [ ] Course Prerequisites
- [ ] Co-requisites
- [ ] Registration Restrictions
- [ ] Other Restrictions Class
- [x] Level
- [ ] College
- [ ] Major
- [x] Other Update CCG (please specify)

### 9. Repeat Status No # of Repeats Max Credits

- n/a 3

### 10. Grading Basis

- [x] A-F
- [ ] P/NP
- [ ] NG

### 11. Implementation Date

- From: Fall/2013
- To: 99/9999

### 12. Cross Listed with

- [ ] Stacked with

Cross-Listed Coordination Signature

### 13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
<td>See attached spreadsheet</td>
<td>12/10/2012</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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<td>3.</td>
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Initiator Name (typed): Kirk Scott

Initiator Signed Initials: _________ Date:________________

### 13b. Coordination Email

- [ ] Submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

Date: 12/10/2012

### 13c. Coordination with Library Liaison

Date: 12/10/2012

### 14. General Education Requirement

Mark appropriate box:

- [x] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)

In-depth coverage of object-oriented programming in the Java programming language. Topics include: Inheritance, abstraction, interfaces, references, polymorphism, dynamic binding, class hierarchies, container classes, random access file I/O, serializability, graphical applications, event handling, UML, and object-oriented design.

### 16a. Course Prerequisite(s)

- [ ] (list prefix and number or test code and score)
- CSCE A201 with minimum grade of C.

### 16b. Co-requisite(s)

- [ ] (concurrent enrollment required)
- n/a

### 16c. Other Restriction(s)

- [ ] College
- [ ] Major
- [ ] Class Level

### 16d. Registration Restriction(s)

- [ ] (non-codable)
- n/a

### 17. Mark if course has fees

### 18. Mark if course is a selected topic course

### 19. Justification for Action

Revision to update the course content guide and establish a course common to both the Computer Science and Computer Systems Engineering programs.

Initiator Name (faculty only) Kirk Scott

Initiator Signed Initials: _________ Date:________________

Approved

Disapproved

Dean/Director of School/College

Date

Approved

Dean/Director of School/College

Disapproved

Undergraduate/Graduate Academic

Date

Approved

Board Chair

Disapproved

Provost or Designee

Date
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<th>Type/Date of Notification</th>
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<td>CAS BS Programming Requirement</td>
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<td>90</td>
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<td>Patty Linton, Karl Pfeiffer (CAS Course &amp; Curriculum Chair)</td>
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<td>Khrys Duddleston</td>
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<tr>
<td>AAS Computer Electronics, KPC</td>
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</table>
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Computer Science and Engineering

I. Revision Date: November 15th, 2012

II. Course Information
A. College: School of Engineering
B. Course Subject/Number: CSCE A202
C. Credits: 3
D. Contact Hours: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours
E. Course Title: Object-Oriented Programming
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: In-depth coverage of object-oriented programming in the Java programming language. Topics include: Inheritance, abstraction, interfaces, references, polymorphism, dynamic binding, class hierarchies, container classes, random access file I/O, serializability, graphical applications, event handling, UML, and object-oriented design.
I. Course Prerequisites: CSCE A201 with minimum grade of C.
J. Fees: Yes

III. Course Level Justification

This course is being offered at the sophomore level as the second in the introductory sequence of courses required for a computer science major.

IV. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Help students achieve a high level of expertise in the object-oriented language chosen for use by the instructor.</td>
<td></td>
</tr>
<tr>
<td>2. Introduce students to the techniques of writing event-driven programs and programs with graphical user interfaces.</td>
<td></td>
</tr>
<tr>
<td>3. Introduce students to programming involving multiple, cooperating classes and class hierarchies.</td>
<td></td>
</tr>
<tr>
<td>4. Provide students with the background needed to pursue object-oriented design, analysis, and modeling methodologies which are covered in subsequent software development courses.</td>
<td></td>
</tr>
</tbody>
</table>
B. **Student Learning Outcomes.** Students will be able to:

<table>
<thead>
<tr>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Write class hierarchies exhibiting characteristics of overloading and polymorphism.</td>
</tr>
<tr>
<td>2. Write programs in which objects of one class act as clients, making use of services provided by other classes.</td>
</tr>
<tr>
<td>3. Write programs that make use of system provided classes, such as arrays, in order to organize and manipulate multiple instances of objects.</td>
</tr>
<tr>
<td>4. Write programs that do I/O with external files.</td>
</tr>
<tr>
<td>5. Write classes that implement interfaces, and classes with inner classes.</td>
</tr>
<tr>
<td>6. Write applications which produce or present graphical material on the screen.</td>
</tr>
<tr>
<td>7. Write applications that do I/O with dialog boxes in windows and which are controlled by menu options.</td>
</tr>
<tr>
<td>8. Write classes or programs which are able to respond to mouse clicks in the application window.</td>
</tr>
</tbody>
</table>

V. **Guidelines for Evaluation**

A. Assignments
B. Exams
C. Project

VI. **Topical Course Outline**

1. Basic Concepts
   a. Inheritance
   b. Abstraction
   c. Interfaces
   d. References
   e. Cloning

2. Definition of Class Hierarchies
   a. Overloading Methods
   b. Overriding Methods
c. Polymorphism

d. Dynamic Binding

3. Use of Class Hierarchies
   a. File I/O classes
   b. Random access file I/O
   c. Persistent objects, serializability
   d. Container classes
   e. Containers for objects in applications

4. Event Driven Programming
   a. Event handling
   b. Listeners
   c. Inner classes
   d. Associating events and application objects

5. Graphical User Interfaces
   a. Associating graphics with application objects
   b. Text areas and scroll bars
   c. Buttons and labels
   d. Keystrokes and menus
   e. Focus and threads

6. Object-Orientation and Complex Applications
   a. Object-oriented design
   b. UML
   c. A machine simulation
   d. Larger scale programming project

VII. Suggested Texts


VIII. Bibliography

1a. School or College  
EN SOENGR

1b. Division
No Division Code

1c. Department
Computer Science and Engineering

2. Course Prefix
CSCE

3. Course Number
A211

4. Previous Course Prefix & Number
CSE A215

5a. Credits/CEUs
4

5b. Contact Hours
(3+2)

6. Complete Course Title
Computer Programming II

Abbreviated Title for Transcript (30 character)

7. Type of Course
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:
☐ Add  ☒ Change  ☐ Delete

If a change, mark appropriate boxes:
☒ Prefix  ☒ Course Number  ☐ Contact Hours  ☐ Repeat Status  ☒ Title
☒ Grading Basis  ☒ Cross-Listed/Stacked  ☐ Course Prerequisites  ☐ Co-requisites
☒ Test Score Prerequisites  ☒ Registration Restrictions  ☐ Other Restrictions
☐ Class  ☐ Level  ☐ College  ☐ Major  ☒ Other Update Course Content Guide (please specify)

9. Repeat Status No
☐ Yes
□ No
# of Repeats
n/a
Max Credits
n/a

10. Grading Basis
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date

From: Fall 2013
To: 99/9999

12. ☐ Cross Listed with
☐ Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Catalog Page(s) Impacted</th>
<th>Date of Coordination</th>
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Initiator Name (typed): Jeffrey Miller
Initiator Signed Initials: ________
Date: __________

13b. Coordination Email
Date: 2012-12-15
submitted to Faculty Listserv: (uu-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison
Date: 2012-12-15

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)
Coverage of object-oriented programming in C++ that includes real-world applications built using objects, classes, inheritance, hierarchies, polymorphism, recursion, event processing, and exception handling.

16a. Course Prerequisite(s) (list prefix and number)
CSCE A201 with minimum grade of C.

16b. Test Score(s)
n/a

16c. Co-requisite(s) (concurrent enrollment required)n/a

16d. Other Restriction(s)
☐ College  ☐ Major  ☐ Class  ☐ Level  ☒ Other

16e. Registration Restriction(s) (non-codable)n/a

17. ☒ Mark if course has fees
☐ Yes

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Revision to include a lab component and establish a course common to both the Computer Science and Computer Systems Engineering programs.

Approved
☐ Disapproved

Initiator (faculty only)
Jeffrey Miller
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved

Dean/Director of School/College
Date

19. Undergraduate/Graduate Academic
Date

☑ Approved

Board Chairperson
Date

Disapproved

Provost or Designee
Date

82
### Course Being Changed: CSE A215

<table>
<thead>
<tr>
<th>Impacted Program or Course</th>
<th>Type of Impact (course or program)</th>
<th>Program Impacts examples: requirement, selective, program credit total</th>
<th>Catalog Page</th>
<th>Type/Date of Notification</th>
<th>Chair/Coordinator Contacted</th>
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<tr>
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<td>Kenrick Mock</td>
<td></td>
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<td>BSE Electrical Engineering</td>
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<td>Jens Munk</td>
<td></td>
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<td>CS A360</td>
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<td>Kenrick Mock</td>
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</table>
Course Content Guide  
University of Alaska Anchorage  
School of Engineering  
Department of Computer Science and Engineering

I. **Revision Date**: February 5, 2013

II. **Course Information**
   A. **College**: Engineering  
   B. **Course Subject/Number**: CSCE A211  
   C. **Credits**: 4  
   D. **Contact Hours**: (3+2)  45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45), 30 contact laboratory hours (2 contact laboratory hour/week x 15 weeks = 30) plus 115 hours outside work ((6 hours outside lecture/week + 1 hour outside laboratory/week) x 15 weeks = 115) for a total of 190 hours  
   E. **Course Title**: Computer Programming II  
   F. **Repeat Status**: No  
   G. **Grading Basis**: A-F  
   H. **Course Description**: Coverage of object-oriented programming in C++ including real-world applications built using objects, classes, inheritance, hierarchies, polymorphism, recursion, event processing, and exception handling.  
   I. **Course Prerequisites**: CSCE A201 with minimum grade of C.  
   J. **Fees**: Yes

III. **Course Level Justification**

This course is a lower division requirement for any student who seeks knowledge in the field of computer programming.

IV. **Instructional Goals and Student Learning Outcomes**

<table>
<thead>
<tr>
<th>A. <strong>Instructional Goals.</strong> The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Provide students with the necessary skills to write programs in a high-level object-oriented language.</td>
</tr>
<tr>
<td>2. Demonstrate by example how to write, test, and debug object-oriented programs inside and outside of an integrated development environment.</td>
</tr>
<tr>
<td>3. Aid students in creating algorithms for solving engineering-related problems.</td>
</tr>
<tr>
<td>4. Introduce students to writing event-driven GUI applications for real-world engineering problems.</td>
</tr>
<tr>
<td>5. Prepare students for large programming applications by integrating a piece of a project into a larger application.</td>
</tr>
</tbody>
</table>
B. **Student Learning Outcomes.** Students will be able to:

<table>
<thead>
<tr>
<th>Assessment method</th>
<th>B. Define an algorithm in pseudo-code and implement it in a high-level programming language using programming design principles.</th>
<th>Assignments, Exams, Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B. Use an Integrated Development Environment (IDE) to create and debug an object-oriented program.</td>
<td>Assignments, Exams, Project</td>
</tr>
<tr>
<td></td>
<td>B. Create applications with a Graphical User Interface (GUI) and event-driven programming.</td>
<td>Assignments, Exams, Project</td>
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<tr>
<td></td>
<td>B. Create an inheritance hierarchy from a high-level specification</td>
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<td></td>
<td>B. Handle unexpected and invalid input from a user.</td>
<td>Assignments, Exams, Project</td>
</tr>
<tr>
<td></td>
<td>B. Integrate code into a larger application of a problem that already exists.</td>
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<td></td>
<td>B. Understand the generic idea among all programming languages and where specific syntax of a language is used.</td>
<td>Assignments, Exams, Project</td>
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V. **Guidelines for Evaluation**
A. Assignments
B. Exams
C. Project

VI. **Topical Course Outline**
1. Introduction to object-oriented programming
2. Classes and objects
3. Member functions, constructors, destructors
4. Pointers
5. Inheritance, polymorphism, dynamic binding
6. Function overloading and overriding
7. Operator overloading
8. Abstract classes and virtual functions
9. Interfacing to external devices
10. Event handling
11. Exception handling
12. Introduction to algorithm analysis
VII.  **Suggested Texts**


VIII.  **Bibliography**

**1a. School or College**
EN SOENGR

**1b. Division**
No Division Code

**1c. Department**
Computer Science & Engineering

**2. Course Prefix**
CSCE

**3. Course Number**
A241

**4. Previous Course Prefix & Number**
CS A241

**5a. Credits/CEUs**
4

**5b. Contact Hours**
(3+3)

**6. Complete Course Title**
Computer Hardware Concepts

**7. Type of Course**
- Academic
- Preparatory/Development
- Non-credit
- CEU
- Professional Development

**8. Type of Action**
- Add
- Change
- Delete

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<tr>
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<tr>
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<td>Co-requisites</td>
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<td>Registration Restrictions</td>
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<td>Level</td>
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<td>Major</td>
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<td>Other Update Course Content Guide (please specify)</td>
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**9. Repeat Status No**
- # of Repeats: n/a
- Max Credits: n/a

**10. Grading Basis**
- A-F
- P/NP
- NG

**11. Implementation Date**
- Semester/year:
  - From: Fall/2013
  - To: 99/9999

**12. Cross Listed with**
- EE A241
- Stacked with
  - Cross-Listed Coordination Signature

**13a. Impacted Courses or Programs:**
List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
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</table>

**Initiator Name (typed):**
Frank Moore

**Initiator Signed Initials:**
________

**Date:**
________

**13b. Coordination Email**
- Date: 12-10-2012
- submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**
- Date: 12-10-2012

**14. General Education Requirement**
Mark appropriate box:
- Oral Communication
- Written Communication
- Quantitative Skills
- Humanities
- Social Sciences
- Natural Sciences
- Integrative Capstone

**15. Course Description**
(suggested length 20 to 50 words)
Analysis and design of electronic devices used as building blocks for construction of simple combinational and sequential digital systems. Presents formats for data storage, number systems and alphanumeric codes, and methods of implementing logical and arithmetic operations within computers. Relates hardware components' capabilities and limitations to design requirements for computer processing, memory, and control functions.

**16a. Course Prerequisite(s) (list prefix and number)**
(CSCE A201 or CSE A205) with minimum grade of C.

**16b. Test Score(s)**
- n/a

**16c. Co-requisite(s) (concurrent enrollment required)**
- n/a

**16d. Other Restriction(s)**
- College
- Major
- Class
- Level

**16e. Registration Restriction(s) (non-codable)**
- n/a

**17. Mark if course has fees**
- Yes

**18. Mark if course is a selected topic course**

**19. Justification for Action**
Revision to establish a course common to both the Computer Science and Computer Systems Engineering programs and update the course content guide.

**Initiator (faculty only)**
- Approved
- Disapproved

**Dean/Director of School/College**
- Date

**Frank Moore**
Initiator (TYPE NAME)

**20. Disapproved**
- Department Chairperson
- Date

**21. Approved**
- Undergraduate/Graduate Academic
- Date

**22. Disapproved**
- Board Chairperson
- Date

**23. Approved**
- Provost or Designee
- Date
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<td>Program requirement</td>
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<td>CSE A445</td>
<td>Prerequisite</td>
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<td>Kenrick Mock</td>
</tr>
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</table>
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Computer Science and Engineering

I. Revision Date: December 10, 2012

II. Course Information
A. College: School of Engineering
B. Course Subject/Number: CSCE A241
C. Credits: 4
D. Contact Hours: 3+3
E. Course Title: Computer Hardware Concepts
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: Analysis and design of electronic devices used as building blocks for construction of simple combinational and sequential digital systems. Presents formats for data storage, number systems and alphanumeric codes, and methods of implementing logical and arithmetic operations within computers. Relates hardware components’ capabilities and limitations to design requirements for computer processing, memory, and control functions.
I. Course Prerequisites: (CSCE A201 or CSE A205) with minimum grade of C.
J. Fees: Yes
K. Cross-listed: EE A241

III. Course Level Justification

This is a first course in computer hardware. It prepares students for more advanced courses in computer hardware and digital systems.

IV. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructor will:</td>
</tr>
<tr>
<td>1. Instill an understanding of whole and fractional, signed and unsigned numbers and techniques used to perform operations on those numbers in systems with base 2, 8, 10, and 16 with various formats.</td>
</tr>
<tr>
<td>2. Present Karnaugh maps, state diagrams, state tables, and other methods used to analyze the operation of combinational and sequential logic circuits.</td>
</tr>
<tr>
<td>3. Provide an understanding of how to design, implement, test, debug, and verify the correct operation of circuits that accomplish decision making, arithmetic, or data manipulation tasks.</td>
</tr>
<tr>
<td>4. Provide an understanding of devices and circuits used in computer architecture.</td>
</tr>
<tr>
<td>5. Present modern techniques for designing control, memory, arithmetic, and communication functions for simple digital computers.</td>
</tr>
</tbody>
</table>
6. Instill an understanding of the importance of proper laboratory procedures and safety.

7. Instill the importance of professionalism in the students and in their interaction with others.

B. **Student Learning Outcomes**

   **Upon completion of this course, students will be able to:**

   1. Express whole and fractional, signed and unsigned numbers and perform operations on those numbers in systems with base 16, 10, 8, and 2 with various formats.
      
      **Assessment method:** Assignments, Quizzes, Exams, Laboratory Exercises, Projects

   2. Apply Karnaugh Maps, slate diagrams, state tables, and other techniques to analyze combinational and sequential logic circuits.
      
      **Assessment method:** Assignments, Quizzes, Exams, Laboratory Exercises, Projects

   3. Design, implement, test, debug, and verify the correct operation of circuits that perform operations according to a given set of specifications.
      
      **Assessment method:** Assignments, Quizzes, Exams, Laboratory Exercises, Projects

   4. Evaluate and select devices and circuits used in computer architecture.
      
      **Assessment method:** Assignments, Quizzes, Exams, Laboratory Exercises, Projects

   5. Design, implement, test, debug, and verify the correct operation of systems that perform control, memory, arithmetic, and communication functions for simple digital computers.
      
      **Assessment method:** Assignments, Quizzes, Exams, Laboratory Exercises, Projects

   6. Handle digital equipment in a lab setting without harming themselves or damaging the equipment.
      
      **Assessment method:** Laboratory Exercises

   7. Practice professionalism in their work and interaction with others.
      
      **Assessment method:** Assignments, Laboratory Exercises, Projects

V. **Guidelines for Evaluation**

   A. Assignments
   B. Quizzes
   C. Exams
   D. Laboratory Exercises
   E. Projects

VI. **Topical Course Outline**

   A. Lecture
      1. Safety: General rules for safe use of required tools and lab equipment
      2. Overview: Fundamental considerations in computer design
      3. Number systems
         i. relationships of decimal, binary, octal, hexadecimal, BCD and floating point number systems
ii. conversion between systems and arithmetic operations in each system

4. Boolean Algebra
   i. gate networks and methods of implementing Boolean expressions with logic gates
   ii. combinational circuits and minimization of devices

5. Electrical characteristics of logic gates. Logic families and differences in their construction, application and operation

6. Timing
   i. operations
   ii. clock
   iii. synchronization

7. Flip-flops and their operation

8. Sequential circuits
   i. counters
   ii. shift registers
   iii. register transfer logic
   iv. algorithmic state machines

9. State descriptions
   i. state diagrams
   ii. state tables
   iii. implementation of desired state sequences

10. Arithmetic Logic Unit (ALU)
    i. add and subtract
    ii. shift logical operations
    iii. multiplex
    iv. multiply and divide

11. Memory
    i. devices used
    ii. organization
    iii. hierarchies
    iv. speed of access

12. Input/Output Devices
    i. uses
    ii. speed
    iii. digital and analog
    iv. coding
    v. error detection
    vi. interrupts

13. Buses and Interfaces
    i. series
    ii. parallel
    iii. addressing

14. The Control Unit
    i. methods of executing machine instruction words
ii. microprogramming versus hardwired control
iii. pipelining

B. Laboratory
   1. power, switching
   2. realization of decision circuits (Boolean)
   3. encoders and decoders
   4. clock circuits
   5. memory circuit basics (flip-flops)
   6. latched data and registers
   7. counters
   8. sequential state machine design
   9. arithmetic operations with logical chips
   10. random access memory (RAM)
   11. analog to digital conversion and display

VII. **Suggested Texts**


VIII. **Bibliography**

**1a. School or College**
ENS

**1b. Division**
No Division Code

**1c. Department**
Electrical Engineering

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<tr>
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<th>4. Previous Course Prefix &amp; Number</th>
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<th>5b. Contact Hours</th>
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<td>A241</td>
<td>EE A241</td>
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**6. Complete Course Title**

**Computer Hardware Concepts**

**Abbreviated Title for Transcript (30 character)**

**7. Type of Course**

- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

**8. Type of Action:**

- [ ] Add
- [x] Change
- [ ] Delete

**If a change, mark appropriate boxes:**

- [ ] Prefix
- [ ] Credits
- [ ] Title
- [ ] Grading Basis
- [x] Course Description
- [ ] Test Score Prerequisites
- [ ] Other Restrictions
- [ ] Other Update Course Content Guide (please specify)

**9. Repeat Status No**

- [ ] # of Repeats
- [ ] Max Credits

- [ ] n/a

**10. Grading Basis**

- [x] A-F
- [ ] P/NP
- [ ] NG

**11. Implementation Date**

- [ ] semester/year

- From: Fall/2013
  - To: 99/9999

**12. Cross Listed with**

- [ ] CSCE A241

- [ ] Stacked

- [ ] Cross-Listed Coordination Signature

**13a. Impacted Courses or Programs:** List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

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**13b. Coordination Email**

Date: 12-10-2012

Submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**

Date: 12-10-2012

**14. General Education Requirement**

Mark appropriate box:

- [ ] Oral Communication
- [ ] Fine Arts
- [ ] Written Communication
- [ ] Social Sciences
- [ ] Quantitative Skills
- [ ] Natural Sciences
- [ ] Humanities
- [ ] Integrative Capstone

**15. Course Description** *(suggested length 20 to 50 words)*

Analysis and design of electronic devices used as building blocks for construction of simple combinational and sequential digital systems. Presents formats for data storage, number systems and alphanumeric codes, and methods of implementing logical and arithmetic operations within computers. Relates hardware components' capabilities and limitations to design requirements for computer processing, memory, and control functions.

**16a. Course Prerequisite(s)** *(list prefix and number)*

(CSCE A201 or CSE A205) with minimum grade of C.

**16b. Test Score(s)**

- [ ] n/a

**16c. Co-requisite(s)** *(concurrence enrollment required)*

- [ ] n/a

**16d. Other Restriction(s)**

- [ ] College
- [ ] Major
- [ ] Class
- [ ] Level

**16e. Registration Restriction(s)** *(non-codable)*

- [ ] n/a

**17. Mark if course has fees**

- [x] Yes

**18. Mark if course is a selected topic course**

**19. Justification for Action**

Revision to establish a course common to both the Computer Science and Computer Systems Engineering programs and update the course content guide.

**Initiator (faculty only)**

- [ ] Approved
- [ ] Disapproved

**Initiator (TYPE NAME)**

<table>
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<th>John Lund</th>
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<th>Provost or Designee</th>
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<td>Date</td>
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**Approved**

**Disapproved**

[93]
Course Being Changed: EE A241

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<td>Course Impacts: prerequisite, corequisite, recommended</td>
<td>Program requirement</td>
<td>242</td>
<td>12/1/12</td>
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Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Electrical Engineering

I. Revision Date: December 10, 2012

II. Course Information
A. College: School of Engineering
B. Course Subject/Number: EE A241
C. Credits: 4
D. Contact Hours: 3+3
E. Course Title: Computer Hardware Concepts
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: Analysis and design of electronic devices used as building blocks for construction of simple combinational and sequential digital systems. Presents formats for data storage, number systems and alphanumeric codes, and methods of implementing logical and arithmetic operations within computers. Relates hardware components’ capabilities and limitations to design requirements for computer processing, memory, and control functions.
I. Course Prerequisites: (CSCE A201 or CSE A205) with minimum grade of C.
J. Fees: Yes
K. Cross-listed: CSCE A241

III. Course Level Justification

This is a first course in computer hardware. It prepares students for more advanced courses in computer hardware and digital systems.

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7. Instill the importance of professionalism in the students and in their interaction with others.

### B. Student Learning Outcomes

Upon completion of this course, students will be able to:

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<tr>
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### V. Guidelines for Evaluation

A. Assignments
B. Quizzes
C. Exams
D. Laboratory Exercises
E. Projects

### VI. Topical Course Outline

A. Lecture
1. Safety: General rules for safe use of required tools and lab equipment
2. Overview: Fundamental considerations in computer design
3. Number systems
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ii. conversion between systems and arithmetic operations in each system

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   ii. combinational circuits and minimization of devices

5. Electrical characteristics of logic gates. Logic families and differences in their construction, application and operation

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   i. operations
   ii. clock
   iii. synchronization

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B. Laboratory
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   6. latched data and registers
   7. counters
   8. sequential state machine design
   9. arithmetic operations with logical chips
   10. random access memory (RAM)
   11. analog to digital conversion and display

VII. Suggested Texts


VIII. Bibliography

1. School or College: EN SOENGR
2. Course Prefix: CSCE
3. Course Number: A248
4. Previous Course Prefix & Number: CS A221
5a. Credits/CEUs: 3
5b. Contact Hours: (3+0)

Complete Course Title:
Computer Organization and Assembly Language Programming

Type of Course: ☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

Type of Action: ☐ Add ☐ Change ☒ Delete

If a change, mark appropriate boxes:
- ☒ Prefix
- ☒ Credits
- ☒ Title
- ☒ Grading Basis
- ☒ Course Description
- ☒ Test Score Prerequisites
- ☒ Other Restrictions
- ☒ Other Update Course Content Guide (please specify)

Repeat Status No ☐ # of Repeats: 2 ☐ Max Credits: 3

Grading Basis: ☒ A-F ☑ P/NP ☐ NG

Implementation Date: ☑ semester/year
From: Fall 2013 To: 99/9999

Cross Listed with: ☐ Stacked with: 
Cross-Listed Coordination Signature:

Impacted Courses or Programs: List any programs or college requirements that require this course.

Initiator Name (typed): Randy Moulic
Initiator Signed Initials: __________ Date: __________

General Education Requirement:
Mark appropriate box:
- Oral Communication
- Written Communication
- Social Sciences
- Quantitative Skills
- Humanities
- Natural Sciences
- Integrative Capstone

Course Description (suggested length 20 to 50 words):
Organization and operation of a computer's processor, including registers, memory, I/O, and control. Assembly language programming with emphasis placed on hardware/software interface and computer design.

Course Prerequisite(s) (list prefix and number):
CSCE A241 and CSCE A211 with minimum grade of C.

Test Score(s): n/a

Co-requisite(s) (concurrent enrollment required): n/a

Other Restriction(s):
- ☐ College
- ☐ Major
- ☐ Class
- ☐ Level

Registration Restriction(s) (non-codable):

Mark if course has fees: Yes

Mark if course is a selected topic course: Yes

Justification for Action:
This is a course revision to consolidate the current CS A221 and CSE A225 that is necessary to reflect the merged curriculum between the Computer Science and Computer Systems Engineering programs.
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<th>Department Chairperson</th>
<th>Date</th>
<th>Approved</th>
<th>Disapproved</th>
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<th>Provost or Designee</th>
<th>Date</th>
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<th>Disapproved</th>
</tr>
</thead>
</table>
# Courses Being Changed: CS A221

<table>
<thead>
<tr>
<th>Impacted Program or Course</th>
<th>Type of Impact (course or program)</th>
<th>Catalog Page</th>
<th>Type/Date of Notification</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA Computer Science</td>
<td>Program requirement</td>
<td>241</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>BS, Computer Science</td>
<td>Program requirement</td>
<td>242</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>Minor Computer Science</td>
<td>Program requirement</td>
<td>243</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>CS A331</td>
<td>Prerequisite</td>
<td>380</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>CS A342</td>
<td>Prerequisite</td>
<td>380</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>CS A395</td>
<td>Prerequisite</td>
<td>380</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
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<tr>
<td>CSE A445</td>
<td>Prerequisite</td>
<td>382</td>
<td>12/20/12</td>
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</tr>
<tr>
<td>CS A448</td>
<td>Prerequisite</td>
<td>381</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>BSE, Computer Systems Engineering</td>
<td>Program requirement</td>
<td>245</td>
<td>12/20/12</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>BSE, Electrical Engineering</td>
<td>Program requirement</td>
<td>245</td>
<td>12/20/12</td>
<td>Jens Munk</td>
</tr>
</tbody>
</table>
Course Content Guide  
University of Alaska Anchorage  
School of Engineering  
Department of Computer Science and Engineering

I. Revision Date: December 20, 2012

II. Course Information
   A. College: School of Engineering
   B. Course Subject/Number: CSCE A248
   C. Credits: 3
   D. Contact Hours: 3 + 0
   E. Course Title: Computer Organization and Assembly Language Programming
   F. Repeat Status: No
   G. Grading Basis: A-F
   H. Course Description: Organization and operation of a computer’s processor, registers, memory, I/O, and control. Assembly language programming with emphasis placed on hardware/software interface.
   I. Course Prerequisites: (CSCE A241 and CSCE A211) with minimum grade of C.
   J. Fees: Yes
   K. Cross-listed: N/A

III. Course Level Justification

The course builds on previous 200-level courses in computer systems engineering and programming.

IV. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>Instructional Goals</th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Provide students with the necessary skills to write programs in assembly language using processor specific instruction set architecture simulation tools</td>
</tr>
<tr>
<td>2.</td>
<td>Demonstrate by example how to write, test, and debug assembly code.</td>
</tr>
<tr>
<td>3.</td>
<td>Aid students in creating algorithms for solving computational problems.</td>
</tr>
<tr>
<td>4.</td>
<td>Allow students to understand the complexity of writing assembly code, and the pros and cons of using it in computing applications.</td>
</tr>
<tr>
<td>5.</td>
<td>Prepare students to design and program large, integrated applications using assembler and high level programming languages.</td>
</tr>
<tr>
<td>6.</td>
<td>Prepare students for advanced, elective courses in computer architecture and VLSI (Very Large Scale Integration) system design.</td>
</tr>
</tbody>
</table>
B. **Student Learning Outcomes.** Upon completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments, Quizzes, Exams, Projects</td>
</tr>
</tbody>
</table>

1. Write, debug and run assembly language programs using computer system processor instruction set architecture development and simulation tools.

2. Explain and use different categories and types of computer instruction set architecture (register, immediate and jump), and underlying computer hardware requirements to necessary to support program execution.

3. Translate assembly language program coding to and from system machine language code for integer and floating point computation.

4. Analyze the data path flow of instructions in the CPU processor hardware. Understand the decoding & control logic which coordinates data path elements (register, ALU and memory) of the processor.

5. Demonstrate the purpose, and use, of cache, and memory hierarchy in computer system design and application program performance.

6. Design, write and demonstrate a complete application project which integrates assembly language coding with a high level programming language such as C.

V. **Guidelines for Evaluation**

A. Assignments
B. Quizzes
C. Exams
D. Projects

VI. **Course Outline**

A. Computer abstractions and technology
B. Instructions, the language of the computer
   1. Assembly language and instructions types/categories
   2. Operands and operations of the computer hardware
   3. Machine language, representing instruction in the computer
C. Arithmetic for Computers
   1. Addition and subtraction operations and hardware implementations
   2. Multiplication and division
   3. Floating point numbers & arithmetic
D. The Computer Central Processing Unit (CPU)
   1. Basic logic design
   2. Processor data path
   3. Implementation of the data path
   4. Processor control and decode elements
   5. Processor pipelining
   6. Instruction level parallelism and performance
   7. Exception interrupts and traps.
E. System Memory Organization
   1. Basics of cache
   2. Measuring and improving cache and application performance
   3. Virtual memory
F. System I/O and Storage
   1. Disk storage operation, technologies
   2. IO performance estimations
G. Multiprocessor systems
   1. Improving system application performance using parallelism.
   2. Limitations and capabilities of parallelism
   3. Amdahl’s law

VII. Suggested Texts


VIII. Bibliography


Leiterman, J., 32/64-Bit 80x86 Assembly Language Architecture, Jones and Bartlett Publishers, Sudbury, MA, 2005
### Course Action Request

**University of Alaska Anchorage**

**Proposal to Initiate, Add, Change, or Delete a Course**

<table>
<thead>
<tr>
<th>1a. School or College</th>
<th>1b. Division</th>
<th>1c. Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN SOENG</td>
<td>No Division Code</td>
<td>Computer Science and Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Course Prefix</th>
<th>3. Course Number</th>
<th>4. Previous Course Prefix &amp; Number</th>
<th>5a. Credits/CEUs</th>
<th>5b. Contact Hours (Lecture + Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE</td>
<td>A302</td>
<td>CS A304</td>
<td>3</td>
<td>(3+0)</td>
</tr>
</tbody>
</table>

**Complete Course Title**

Object-Oriented Design Patterns

**Abbreviated Title for Transcript (30 character)**

### Type of Course
- [x] Academic
- [ ] Preparatory/Development
- [ ] Non-credit
- [ ] CEU
- [ ] Professional Development

### Type of Action: [ ] Add or [x] Change or [ ] Delete

If a change, mark appropriate boxes:

- [x] Prefix
- [x] Course Number
- [x] Grade Basis
- [x] Title
- [x] Contact Hours
- [x] Repeat Status
- [x] Cross-Listed/Stacked
- [x] Course Prerequisites
- [x] Co-requisites
- [x] Registration Restrictions
- [ ] Class
- [ ] Level
- [ ] College
- [ ] Major
- [ ] Other
  (please specify)

### Repeat Status
- [ ] No
- [ ] # of Repeats
- [ ] n/a
- [x] Max Credits 3

### Grading Basis
- [x] A-F
- [ ] P/NP
- [ ] NG

### Implementation Date
- From: Fall/2013
- To: 99/9999

### Cross Listed with
- [ ] Stacked with

### Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

**Impacted Program/Course**

<table>
<thead>
<tr>
<th>Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. B.A., B.S., Computer Science</td>
<td>12/10/2012</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>2. BSE CSE, Selective</td>
<td>12/10/2012</td>
<td>Kenrick Mock</td>
</tr>
<tr>
<td>3. BS Natural Science, Selective</td>
<td>12/10/2012</td>
<td>Khrys Duddleston</td>
</tr>
</tbody>
</table>

Initiator Name (typed): Kirk Scott

Initiator Signed Initials: ________

Date: __________________

### Coordination with Library Liaison
- Date: 12/10/2012

### General Education Requirement

Mark appropriate box:

- [ ] Oral Communication
- [ ] Written Communication
- [ ] Quantitative Skills
- [ ] Humanities
- [ ] Fine Arts
- [ ] Social Sciences
- [ ] Natural Sciences
- [ ] Integrative Capstone

### Course Prerequisite(s)

(list prefix and number or test code and score)

CSCE A202 with minimum grade of C.

### Co-requisite(s)

(concurrent enrollment required)

n/a

### Other Restriction(s)

<table>
<thead>
<tr>
<th>College</th>
<th>Major</th>
<th>Class</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>[x]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Registration Restriction(s)

(non-codable)

n/a

### Mark if course has fees
- [ ]

### Mark if course is a selected topic course
- [ ]

### Justification for Action

Revision to establish a course common to both the Computer Science and Computer Systems Engineering programs and update the course content guide.

Initiator (faculty only)

Kirk Scott

Initiator (TYPE NAME)

[ ] Approved

[ ] Disapproved

Dean/Director of School/College

Date

[ ] Approved

[ ] Disapproved

Undergraduate/Graduate Academic

Date

[ ] Approved

[ ] Disapproved

Board Chair

Date

[ ] Approved

[ ] Disapproved

Provost or Designee

Date
I. **Revision Date**: November 15th, 2012

II. **Course Information**
   A. **College**: School of Engineering  
   B. **Course Subject/Number**: CSCE A302  
   C. **Credits**: 3  
   D. **Contact Hours**: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours  
   E. **Course Title**: Object-Oriented Design Patterns  
   F. **Repeat Status**: No  
   G. **Grading Basis**: A-F  
   H. **Course Description**: Introduction to the basic concept of design patterns as part of programming practice and an examination of significant patterns in detail. The course will include selected programming assignments and projects in a current object-oriented language.  
   I. **Course Prerequisites**: CSCE A202 with minimum grade of C.  
   J. **Fees**: Yes

III. **Course Level Justification**

   This course builds upon fundamental programming concepts taught at the 200 level. It is offered at the junior level so that students may take it before enrolling in senior level courses.

IV. **Instructional Goals and Student Learning Outcomes**

<table>
<thead>
<tr>
<th>A. <strong>Instructional Goals</strong></th>
<th>The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduce object-orientation as a paradigm for effective software implementation.</td>
</tr>
<tr>
<td>2.</td>
<td>Explain example code and diagrams to illuminate specific design patterns which arise from object-orientation.</td>
</tr>
<tr>
<td>3.</td>
<td>Integrate design patterns into student knowledge of basic programming concepts and constructs.</td>
</tr>
<tr>
<td>4.</td>
<td>Illustrate the application of design patterns to the solution of programming problems.</td>
</tr>
</tbody>
</table>
### Student Learning Outcomes

<table>
<thead>
<tr>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
</tr>
<tr>
<td>Assignments</td>
</tr>
<tr>
<td>Project</td>
</tr>
</tbody>
</table>

Students will be able to:

1. Demonstrate knowledge of object-oriented design patterns by providing textual answers to questions, drawing diagrams, writing pseudo-code, and writing code.

2. Following provided examples, write code that implements specific design patterns.

3. Write one or more object-oriented computer application programs which include one or more design patterns in their implementation.

### Guidelines for Evaluation

A. Assignments
B. Exams
C. Project

### Topical Course Outline

1. Review of object-orientation
   - Definition
   - History
   - Utility
   - Applications
   - Principles
2. Interface patterns
   - Adapter
   - Façade
   - Composite
   - Bridge
3. Responsibility patterns
   - Singleton
   - Observer
   - Mediator
   - Proxy
   - Chain of responsibility
   - Flyweight
4. Construction patterns
   - Builder
   - Factory method
   - Abstract factory
   - Prototype
   - Memento
5. Operation patterns
a. Template method
b. State
c. Strategy
d. Command
e. Interpreter

6. Extension patterns
   a. Decorator
   b. Iterator
   c. Visitor

VII. Suggested Texts

Freeman, E. and Freeman, E. Head First Design Patterns, O'Reilly, Sebastopol, CA, 2004.

VIII. Bibliography

Grand, M. Patterns in Java: A Catalog of Reusable Design Patterns Illustrated with UML, 2nd edition, John Wiley and Sons, Indianapolis, IN, 2002.
1a. School or College  
EN SOENGR  
1b. Division  
No Division Code  
1c. Department  
Computer Science and Engineering

2. Course Prefix  
CSCE  
3. Course Number  
A305  
4. Previous Course Prefix & Number  
n/a  
5a. Credits/CEUs  
3  
5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Android Programming  
Abbreviated Title for Transcript (30 character)

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☒ Add  or  ☐ Change  or  ☐ Delete

If a change, mark appropriate boxes:

☐ Prefix  
☐ Credits  
☐ Title  
☐ Contact Hours  
☐ Repeat Status  
☐ Course Number  
☐ Cross-Listed/Stacked  
☐ Course Prerequisites  
☐ Co-requisites  
☐ Registration Restrictions  
☐ Other Restrictions  
☐ Class  ☐ Level  ☐ College  ☐ Major  (please specify)

9. Repeat Status No  # of Repeats  n/a  Max Credits  3

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  
From: Fall/2013  
To: 99/9999

12. ☐ Cross Listed with  
☐ Stacked with  
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
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<td>1.</td>
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</tr>
<tr>
<td>2.</td>
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<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
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</table>

Initiator Name (typed): Kirk Scott  
Initiator Signed Initials: _________  Date:________________

13b. Coordination Email  
Date: 12/10/2012  
submitted to Faculty Listserv: (uas-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison  
Date: 12/10/2012

14. General Education Requirement  
Mark appropriate box:  
☐ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities  
☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
Covers Android development concepts and programming. Topics include development environments, design issues, interface and I/O, code development, and publication.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
CSCE A202 with minimum grade of C.

16b. Co-requisite(s) (concurrent enrollment required)  
n/a

16c. Other Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)  
n/a

17. ☒ Mark if course has fees  
18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Industry demand. This is a subject requested by Anchorage IT professionals as a result of a survey conducted in late 2012 by the Computer Science & Engineering Advisory Board.

Initiator (faculty only)  
Kirk Scott  
Initiator (TYPE NAME)

☐ Approved  
☐ Disapproved  
Dean/Director of School/College  
Date

☐ Approved  
☐ Disapproved  
Undergraduate/Graduate Academic Board Chair  
Date

☐ Approved  
☐ Disapproved  
Provost or Designee  
Date
Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Computer Science and Engineering

I. Revision Date: November 15th, 2012

II. Course Information
A. College: School of Engineering
B. Course Subject/Number: CSCE A305
C. Credits: 3
D. Contact Hours: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours
E. Course Title: Android Programming
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: Covers Android development concepts and programming. Topics include development environments, design issues, interface and I/O, code development, and publication.
I. Course Prerequisites: CSCE A202 with minimum grade of C.
J. Fees: Yes

III. Course Level Justification

This course builds upon fundamental programming concepts taught at the 200 level. It is offered as a junior level elective for students interested in the area of Android programming/mobile development.

IV. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals. The instructor will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Present principles and concepts of Android mobile development.</td>
</tr>
<tr>
<td>2. Develop, diagram, and explain programs which exemplify the concepts of object-oriented programming practice in a mobile environment.</td>
</tr>
<tr>
<td>3. Illustrate accepted design, documentation, and implementation practices and methodologies for the concepts given.</td>
</tr>
</tbody>
</table>
B. **Student Learning Outcomes.** Students will be able to:

<table>
<thead>
<tr>
<th></th>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Answer questions about Android mobile development programming concepts and implementation techniques</td>
<td>Assignments, Exams</td>
</tr>
<tr>
<td>2. Modify provided code to include new features presented in the course.</td>
<td>Assignments, Exams</td>
</tr>
<tr>
<td>3. Write original code to specifications given, which embodies the concepts and practices of the course</td>
<td>Assignments, Exams</td>
</tr>
<tr>
<td>4. Formulate specifications, design, document, and code a complete mobile application.</td>
<td>Assignments, Project</td>
</tr>
</tbody>
</table>

V. **Guidelines for Evaluation**

A. Assignments  
B. Exams  
C. Project

VI. **Topical Course Outline**

1. Development Environments  
a. Configuration  
b. Tools  
c. Frameworks  
d. Upgrading

2. Development Environment Usage  
a. Virtualization  
b. Emulation  
d. Debugging

3. Structure and Graphical Tools  
a. Resources and Hierarchies  
b. User Interface Design and Optimization  
c. Layout View

4. Application Contexts and Activities  
a. Using Contexts  
b. Performing Application Tasks with Activities  
c. Activity Transitions/Navigations with Intents  
d. Working with Services

5. Application Definition  
a. Application Identity  
b. System Requirements  
c. Registration in the Manifest  
d. Permissions

6. User Interface Screen Elements
a. Views and Layouts
b. Displaying Text
c. Textual Data Input
d. Graphical I/O Components

7. Interfaces and Layouts
   a. Interface Organization
   b. Built-in Layout Classes
   c. Container Control Classes
   d. Dialogs

8. Internals
   a. Preferences
   b. Files and Directories
   c. Content Providers
   d. Compatibility

9. Production
   a. Development Process
   b. Security and Robustness
   c. Testing
   d. Publishing and Distributing

VII. Suggested Texts


VIII. Bibliography

1a. School or College  
EN SOENGR

1b. Division  
No Division Code

1c. Department  
Computer Science and Engineering

2. Course Prefix  
CSCE

3. Course Number  
A311

4. Previous Course Prefix & Number  
CS A330

5a. Credits/CEUs  
3

5b. Contact Hours  
(Lecture + Lab)  
(3+0)

6. Complete Course Title  
Data Structures and Algorithms

7. Type of Course  
☒ Academic  ☐ Preparatory/Development  ☐ Non-credit  ☐ CEU  ☐ Professional Development

8. Type of Action:  
☒ Add  ☐ Change  ☐ Delete

If a change, mark appropriate boxes:

☒ Prefix  ☐ Course Number  ☐ Contact Hours  ☐ Repeat Status  ☐ Grade Basis  ☐ Title  ☐ Co-requisites  ☐ Course Prerequisites  ☐ Other Restrictions  ☐ Registration Restrictions  ☐ Other Update Course Content Guides (please specify)

9. Repeat Status No  # of Repeats  n/a  Max Credits  3

10. Grading Basis  
☒ A-F  ☐ P/NP  ☐ NG

11. Implementation Date  semester/year  
From: Fall/2013  To: 99/9999

12. Cross Listed with  
☐ Yes  ☐ No

13a. Impacted Courses or Programs:  
List any programs or college requirements that require this course.

<table>
<thead>
<tr>
<th>Impacted Program/Course</th>
<th>Date of Coordination</th>
<th>Chair/Coordinator Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. B.A., B.S., Computer Science</td>
<td>12/10/2012</td>
<td>Kerick Mock</td>
</tr>
<tr>
<td>2. BS CSE, Required course</td>
<td>12/10/2012</td>
<td>Kerick Mock</td>
</tr>
<tr>
<td>3. BS Natural Science, Selective</td>
<td>12/10/2012</td>
<td>Khrys Duddleston</td>
</tr>
</tbody>
</table>

Initiator Name (typed): Martin Cenek  
Initiator Signed Initials:  
Date:

13b. Coordination Email  
Date: 12/10/2012  
submitted to Faculty Listserv:  (uac-faculty@lists.uac.alaska.edu)

13c. Coordination with Library Liaison  
Date: 12/10/2012

14. General Education Requirement  
Mark appropriate box:

☒ Oral Communication  ☐ Written Communication  ☐ Quantitative Skills  ☐ Humanities  ☐ Fine Arts  ☐ Social Sciences  ☐ Natural Sciences  ☐ Integrative Capstone

15. Course Description (suggested length 20 to 50 words)  
Representation and organization of digital information in the form of effective and efficient data structures, manipulation of data structures in a procedural fashion, and the analysis and evaluation of various algorithms. The following topics will be covered: ADT, arrays, tables, linked lists, stacks, queues, trees, sorting, searching, graphs, hashing, spanning trees, disjoint sets, and heaps.

16a. Course Prerequisite(s) (list prefix and number or test code and score)  
(CSCE A211 and MATH A231) with minimum grade of C.

16b. Co-requisite(s) (concurrent enrollment required)  
n/a

16c. Other Restriction(s)  
☐ College  ☐ Major  ☐ Class  ☐ Level

16d. Registration Restriction(s) (non-codable)  
Students must declare a major prior to enrollment

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action  
Revision to establish a course common to both the Computer Science and Computer Systems Engineering programs and update the course content guide.

Initiator (faculty only)  
Martin Cenek

Initiator (TYPE NAME)  
☑ Approved  ☐ Disapproved

Date  
Dean/Director of School/College  
Date  
Undergraduate/Graduate Academic  
Board Chair  
Date  
Provost or Designee  
Date
Course Being Changed: **CS A330**

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<th>Type/Date of Notification</th>
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<td>Fred Rainey (<a href="mailto:farainey@uaa.alaska.edu">farainey@uaa.alaska.edu</a>)</td>
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I. Revision Date: February 5, 2013

II. Course Information
   A. College: School of Engineering
   B. Course Subject/Number: CSCE A311
   C. Credits: 3
   D. Contact Hours: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours
   E. Course Title: Data Structures and Algorithms
   F. Repeat Status: No
   G. Grading Basis: A-F
   H. Course Description: Representation and organization of digital information in the form of effective and efficient data structures, manipulation of data structures in a procedural fashion, and the analysis and evaluation of various algorithms. The following topics will be covered: ADT, arrays, tables, linked lists, stacks, queues, trees, sorting, searching, graphs, hashing, spanning trees, disjoint sets, and heaps.
   I. Course Prerequisites: (CSCE A211 and MATH A231) with minimum grade of C.
   J. Fees: Yes
   K. Registration Restrictions: Major must be declared

III. Course Level Justification

The course is taught nationwide at the upper division (sophomore/junior) level as the third course in the programming sequence required for computer science and computer system engineering majors.

This course is designed to be an advanced course on data structures and algorithms. The course is an extension of CSCE A211 (Computer Programming II) and is intended to prepare the students for the solution of more complex problems through the introduction to and use of advanced data structures and the algorithms for their manipulation. Students satisfactorily completing this course will be prepared to pursue the development of object-oriented solutions. They will also have an understanding of the various types of data structures (or methods of organizing large amounts of data) and principles of algorithm analysis (or estimates of running times associated with algorithms).

IV. Instructional Goals and Student Learning Outcomes

   A. Instructional Goals. The instructor will:
      1. Aid students to achieve an expert knowledge of how to represent and organize digital
information by variety of data-structures applicable in most object-oriented languages.

2. Introduce students to the techniques of manipulating these structures by algorithms to perform common actions on the data structures such as finding, retrieving, adding, and deleting information.

3. Illustrate benefits and drawbacks of different algorithms by analytically and experimentally evaluating algorithmic efficiency.

4. Provide students with the background knowledge and skills needed to successfully design, implement, modify and evaluate digital information in subsequent upper-division computer science courses.

<table>
<thead>
<tr>
<th>B. Student Learning Outcomes</th>
<th>Assessment method</th>
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<tbody>
<tr>
<td>1. Design suitable information representations for a variety of problems.</td>
<td>Assignments, Quizzes, Exams</td>
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<tr>
<td>2. Describe appropriate algorithms and data structures for a number of well-defined problems.</td>
<td>Assignments, Quizzes, Exams</td>
</tr>
<tr>
<td>3. Design algorithms to solve given problems using techniques such as divide-and-conquer.</td>
<td>Assignments, Quizzes, Exams</td>
</tr>
<tr>
<td>4. Implement algorithms and data structures in a computer programming language: C++ or Java.</td>
<td>Assignments, Quizzes, Exams</td>
</tr>
<tr>
<td>5. Analyze the time and space efficiency of an algorithm, use the big-O notation.</td>
<td>Assignments, Quizzes, Exams</td>
</tr>
<tr>
<td>6. Measure the time and space requirements of an algorithm.</td>
<td>Assignments, Quizzes, Exams</td>
</tr>
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</table>

V. Guidelines for Evaluation
   A. Assignments
   B. Exams
   C. Quizzes

VI. Topical Course Outline

1. Design and analysis of algorithms
   a. From problems to programs
   b. Data types, data structures and abstract data types
   c. Program run time calculations: asymptotic notation, summation, recurrence
   d. Structured programming concepts

2. Basic data types
   a. Linked lists
   b. Stacks
   c. Queues
   d. Last In First Out (LIFO), First In First Out (FIFO), circular, priority
   e. Mappings
   f. Stacks and recursive procedures
3. Trees
   a. The Abstract Data Type (ADT) tree
   b. Implementation of trees
   c. Binary trees

4. Basic operation on sets
   a. Introduction to sets
   b. Bit-vector and linked list implementation of sets
   c. Dictionaries and their implementation
   d. Hash tables
   e. Priority queues

5. Advanced set representation methods
   a. Binary search trees
   b. Sets with the UNION and FIND operations
   c. An ADT with UNION and SPLIT

6. Graphs
   a. Basic definitions
   b. Single-source and all-paths shortest path problem
   c. Traversal of directed graphs, Breadth First Search, Depth First Search
   d. Minimum cost spanning trees: Kruskal, Prim
   e. Directed graph traversals

7. Algorithm analysis techniques
   a. Divide and conquer algorithms
   b. Dynamic programming

8. Data structures and algorithms for external storage
   a. External sorting
   b. Quick sort, Merge sort, Selection sort, Insertion sort, Heap sort, Bucket sort
   c. External search trees

VII. Suggested Texts


VIII. Bibliography


1. **School or College**: EN SOENGR
2. **Course Prefix**: CSCE
3. **Course Number**: A331
4. **Previous Course Prefix & Number**: CS A331
5a. **Credits/CEUs**: 3
5b. **Contact Hours**: (3+0)
6. **Complete Course Title**: Programming Language Concepts
7. **Type of Course**: Academic
8. **Type of Action**: Add
9. **Repeat Status No**: # of Repeats n/a Max Credits n/a
10. **Grading Basis**: A-F P/NP NG
11. **Implementation Date**: semester/year
   - From: Fall 2013
   - To: 99/9999
12. **Cross Listed with**: Stacked with
13a. **Impacted Courses or Programs**: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.
14. **General Education Requirement**: Mark appropriate box:
   - Oral Communication
   - Written Communication
   - Quantitative Skills
   - Humanities
   - Social Sciences
   - Natural Sciences
   - Integrative Capstone
15. **Course Description** (suggested length 20 to 50 words):
   - Study of the theoretical foundations to design and implement modern programming languages, including syntax, type systems, semantics, and memory structures. Comparison of several programming languages in different paradigms such as procedural, functional, logic, and scripting languages. Programming assignments will be given in each language studied.
16a. **Course Prerequisite(s)** (list prefix and number) (CSCE A248 and CSCE A311) with minimum grade of C.
16b. **Test Score(s)** n/a
16c. **Co-requisite(s)** (concurrent enrollment required) n/a
16d. **Other Restriction(s)**
   - College
   - Major
   - Class
   - Level
17. **Mark if course has fees**: Yes
18. **Mark if course is a selected topic course**: No
19. **Justification for Action**
   - Revision to establish a course common to both the Computer Science and Computer Systems Engineering programs and update the course content guide.

**Initiator Name (typed):** Kenrick Mock

**Initiator Signed Initials**: ____________ **Date:** ____________

**13b. Coordination Email**
- Date: 12/10/2012
- submitted to Faculty Listserv: (uac-faculty@lists.uaa.alaska.edu)

**13c. Coordination with Library Liaison**
- Date: 12/10/2012

**16d. Other Restriction(s)**
- College
- Major
- Class
- Level

**16e. Registration Restriction(s)** (non-codable)
- n/a

**17. Mark if course has fees**
- Yes

**18. Mark if course is a selected topic course**
- No
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<tr>
<th>Impacted Program or Course</th>
<th>Type of Impact (course or program)</th>
<th>Course Impacts examples: prerequisite, corequisite, recommended</th>
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I. **Revision Date**: November 25, 2012

II. **Course Information**
   A. **College**: School of Engineering
   B. **Course Subject/Number**: CSCE A331
   C. **Credits**: 3
   D. **Contact Hours**: (3+0) 45 contact lecture hours (3 contact lecture hours/week x 15 weeks = 45) plus 90 hours outside work (6 hours outside lecture/week x 15 weeks = 90) for a total of 135 hours
   E. **Course Title**: Programming Language Concepts
   F. **Repeat Status**: No
   G. **Grading Basis**: A-F
   H. **Course Description**: Study of the theoretical foundations to design and implement modern programming languages, including syntax, type systems, semantics, and memory structures. Comparison of several programming languages in different paradigms such as procedural, functional, logic, and scripting languages. Programming assignments will be given in each language studied.
   I. **Course Prerequisites**: (CSCE A248 and CSCE A311) with minimum grade of C.
   J. **Fees**: Yes

III. **Course Level Justification**

   This is an upper division course that depends on the background and intellectual maturity acquired from introductory programming courses. The course is typically taught nationwide at the upper division level.

IV. **Instructional Goals and Student Learning Outcomes**

<table>
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<tr>
<th><strong>Instructional Goals</strong></th>
<th>The instructor will:</th>
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<tr>
<td>1.</td>
<td>Demonstrate the differences and similarities between the major classes of programming languages.</td>
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<tr>
<td>2.</td>
<td>Show how computer hardware influences the programming language environment.</td>
</tr>
<tr>
<td>3.</td>
<td>Describe the syntax, semantics, and abstractions of programming languages.</td>
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</table>
B. **Student Learning Outcomes.** Students will be able to:

<table>
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<th></th>
<th>Assessment method</th>
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<tbody>
<tr>
<td>1. Evaluate new languages and select the appropriate language for a project</td>
<td>Assignments, Exams, Projects</td>
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<tr>
<td>2. Design and write programs in multiple programming languages</td>
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</tr>
<tr>
<td>3. Identify and utilize the syntax and semantic structures to construct a programming language</td>
<td>Assignments, Exams, Projects</td>
</tr>
</tbody>
</table>

V. **Guidelines for Evaluation**

A. Assignments
B. Exams
C. Projects

VI. **Topical Course Outline**

1. Programming Language Overview
   a. Computational paradigms
   b. Abstractions in programming languages
   c. History
2. Language Design Principles
   a. Design criteria
   b. Efficiency
   c. Generality and Orthogonality
3. Syntax
   a. Lexical structure
   b. Context free grammars and Backus Naur Format (BNF)
   c. Parse trees and abstract syntax trees
   d. Ambiguity and precedence
   e. Parsing tools
4. Semantics
   a. Attributes and semantic functions
   b. Declarations, block, scope
   c. Symbol table
   d. Allocation, extent, environment
   e. Variables
   f. Aliases and garbage
   g. Expressive evaluation
5. Data Types
   a. Simple types
   b. Type constructors
   c. Type equivalence
   d. Type checking
   e. Type casting
6. Control
   a. Loops
   b. Methods
   c. Exceptions
7. Abstract Data Types
8. Low-Level Languages
   a. C/C++
9. Object-Oriented Languages
   a. Objects, classes, methods
   b. Inheritance
   c. Dynamic binding and polymorphism
   d. Java, C++, C#
10. Functional Programming
    a. Lambda calculus
    b. Lip, Scheme, ML, Haskell
11. Logic Programming
    a. Logic and predicate calculus
    b. Horn clauses
    c. Resolution and unification
    d. Prolog
12. Script-based and Interpreted Languages
    a. PHP
    b. Client-server architecture
    c. Javascript
    d. Perl
13. Formal Semantics
    a. Operational
    b. Denotational
    c. Axiomatic
    d. Program correctness
14. Other Languages
    a. Parallel environments
    b. Virtual machines
    c. Graphical User Interface (GUI) and event-based languages

VII. Suggested Texts

VIII. Bibliography

Parr, T.J. Language Implementation Patterns: Create Your Own Domain-Specific and General Programming Languages. Pragmatic Programmers LLC, 2009.
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### 6. Complete Course Title
Digital Circuits Design

#### Abbreviated Title for Transcript (30 character)

| 7. Type of Course | ☑ Academic | ☐ Preparatory/Development | ☐ Non-credit | ☐ CEU | ☐ Professional Development |

| 8. Type of Action: | ☐ Add | ☒ Change | ☐ Delete |
| If a change, mark appropriate boxes: | ☑ Prefix | ☐ Course Number | ☑ Credits | ☐ Contact Hours | ☑ Title | ☑ Repeat Status | ☑ Grading Basis | ☐ Cross-Listed/Stacked | ☐ Course Prerequisites | ☐ Co-requisites | ☐ Registration Restrictions | ☐ Class | ☐ Level | ☐ College | ☐ Major |

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| 10. Grading Basis | ☑ A-F | ☐ P/NP | ☐ NG |

| 11. Implementation Date | semester/year |
| From: | Fall/2013 | To: | 99/9999 |

| 12. Cross Listed with | ☐ Stacked with | Cross-Listed Coordination Signature |

### 13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at [www.uaa.alaska.edu/governance](http://www.uaa.alaska.edu/governance).

#### Impacted Program/Course

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<th>Chair/Coordinator Contacted</th>
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Initiator Name (typed): ____________ Initiator Signed Initials: ____________ Date: ____________

### 13b. Coordination Email

Date: ____________ submitted to Faculty Listserv: [uaa-faculty@lists.uaa.alaska.edu](mailto:uaa-faculty@lists.uaa.alaska.edu)

### 13c. Coordination with Library Liaison

Date: ____________

### 14. General Education Requirement

Mark appropriate box:

- Oral Communication
- Written Communication
- Social Sciences
- Quantitative Skills
- Humanities
- Fine Arts
- Natural Sciences
- Integrative Capstone

### 15. Course Description (suggested length 20 to 50 words)

Digital system design using integrated circuits and field-programmable gate arrays (FPGAs). Design and discussion of data path and control units, finite state machines, timing analysis. Digital circuit simulation and electronic schematic creation.

### 16a. Course Prerequisite(s) (list prefix and number or test code and score)

CSCE/EE A241 with minimum grade of C.

### 16b. Co-requisite(s) (concurrent enrollment required)

N/A

### 16c. Other Restriction(s)

- ☑ College
- ☐ Major
- ☐ Class
- ☐ Level

### 16d. Registration Restriction(s) (non-codable)

N/A

### 17. ☑ Mark if course has fees Yes

### 18. ☐ Mark if course is a selected topic course

### 19. Justification for Action

Revision to establish a course common to both the Computer Science and Computer Systems Engineering programs and update the course content guide.

Initiator (faculty only) Randy Moulic
Initiator (TYPE NAME)

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Dean/Director of School/College

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Undergraduate/Graduate Academic Board Chair

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Provost or Designee

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Department Chair

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College/School Curriculum Committee Chair

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Course Content Guide
University of Alaska Anchorage
School of Engineering
Department of Computer Science and Engineering

I. Revision Date: November 26, 2012

II. Course Information
A. College: School of Engineering
B. Course Subject/Number: CSCE A342
C. Credits: 3
D. Contact Hours: 3 + 0
E. Course Title: Digital Circuits Design
F. Repeat Status: No
G. Grading Basis: A-F
H. Course Description: Digital system design using integrated circuits and field-programmable gate arrays (FPGAs). Design and discussion of data path and control units, finite state machines, timing analysis. Digital circuit simulation and electronic schematic creation.
I. Course Prerequisites: CSCE/EE A241 with minimum grade of C.
J. Fees: Yes
K. Cross-listed: N/A

III. Course Level Justification

The course builds on previous 200-level courses in introductory digital design.

IV. Instructional Goals and Student Learning Outcomes

<table>
<thead>
<tr>
<th>A. Instructional Goals.</th>
<th>The instructor will:</th>
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<tbody>
<tr>
<td>1. Provide students with the tools and techniques needed to develop complex digital circuits</td>
<td></td>
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<tr>
<td>2. Introduce students to creating digital circuits in simulation software.</td>
<td></td>
</tr>
<tr>
<td>3. Aid students in creating digital circuits in hardware.</td>
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<tr>
<td>4. Differentiate between FPGAs and Complex Programmable Logic Devices (CPLD) and the complexity, performance, and cost tradeoffs of each technology.</td>
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<tr>
<td>5. Prepare students for a large engineering application of creating a complex</td>
<td></td>
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</tbody>
</table>
A circuit using FPGAs.

B. **Student Learning Outcomes.** Upon completion of this course, students will be able to:

<table>
<thead>
<tr>
<th>#</th>
<th>Activity</th>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Design a complex digital circuit.</td>
<td>Assignments, Quizzes, Exams, Projects</td>
</tr>
<tr>
<td>2</td>
<td>Explain how CPLDs and FPGAs function, and the tradeoffs of each technology.</td>
<td>Assignments, Quizzes, Exams, Projects</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrate fluency in at least one hardware description language</td>
<td>Assignments, Quizzes, Exams, Projects</td>
</tr>
<tr>
<td>4</td>
<td>Demonstrate an understanding of how an Arithmetic Logic Unit (ALU) works in a Central Processing Unit (CPU).</td>
<td>Assignments, Quizzes, Exams, Projects</td>
</tr>
<tr>
<td>5</td>
<td>Verify the operation of Hardware Description Language (HDL) designs using test benches</td>
<td>Assignments, Quizzes, Exams, Projects</td>
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<tr>
<td>6</td>
<td>Design and implement a large-scale engineering application using FPGAs.</td>
<td>Assignments, Projects</td>
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V. **Guidelines for Evaluation**

A. Assignments
B. Quizzes
C. Exams
D. Projects

VI. **Course Outline**

A. Digital design review
B. Hardware description languages (HDLs) – Xilinx™ ABEL, Very-high-speed integrated circuit HDL (VHDL), Verilog
   1. Project example: defining combinatorial logic with HDLs
   2. Project example: defining sequential logic with HDLs
C. Timing and verification
   1. Project example: specifying delays with HDLs
2. Project example: writing and using test benches for HDL designs

D. Complex programmable logic devices (CPLDs)

E. Field programmable gate arrays (FPGAs)
   1. Project example: circuit design and analysis with FPGAs

F. Arithmetic and logic units (ALUs) with FPGAs
   1. Project example: implementing ALUs with FPGAs

G. Input/Output (I/O) design and considerations
   1. Project example: multi-digit 7-segment display driver

H. Memory – Read Only Memory (ROM), Read/Write Memory, Static/Dynamic Random Access Memory (RAM)
   1. Project example: using FPGA block RAM

I. Complex system design and analysis with FPGAs
   1. Project example: final project

VII. Suggested Texts


VIII. Bibliography


Currently, UAA has no formal policies on academic program suspension or deletions. Our offices need to be able to give guidance to programs considering suspensions or deletions. The attached draft policies are designed to provide this guidance and address accreditation and Board of Regents requirements.

Input from the Policy Advisory Committee, the academic deans, and community campus directors have been incorporated into this draft, and we are submitting it to the academic boards for consideration.

The policies are designed to apply to a variety of purposes for program suspension and deletion, such as addressing temporary circumstances, making major program revisions, or deleting programs which have been suspended for several years.

We look forward to receiving your feedback on the draft.
Academic Program Suspension and Deletion Policies

When planning to suspend or delete an academic program, a number of considerations must be addressed to comply with the policies of the University of Alaska (UA)1 and the Northwest Commission on Colleges and Universities (NWCCU).2 These considerations include, but are not limited to, the impact on students currently enrolled in the program, the impact on the community in which the program is offered, and the impact on other academic programs in the University of Alaska System.

Academic Program Suspension of Admissions

There are a variety of reasons why program faculty and academic deans/campus directors consider suspending admissions to an academic program. These may include, among others, temporary circumstances (e.g., insufficient faculty to meet substantial enrollment increases), planned major revisions to the program (e.g., deleting a track or changing the degree level), or potential program deletion (discussed in greater detail in the next section).

Steps for Program Suspension (see Diagram 1)

1. **Program Suspension:** Academic dean/campus director submits a memo to the provost requesting suspension of admission.3 Requests for suspension should indicate the implementation date, reason for the suspension, planned duration, and identification of impacts on other UAA programs or departments. By the conclusion of the fifth year of suspension, programs must reinstate admission, request extension of suspension, or initiate the deletion process.
   a. For programs offered on a community campus, the applicable academic dean or campus director (as determined by the UAA Catalog chapter in which the program is published) should be notified prior to the suspension of the program. For programs offered on multiple campuses, each applicable dean or campus director should be notified prior to suspension of the program. 4

2. **UA System and Accreditation Notification:** Following the approval of program suspension by the provost, Academic Affairs will notify the Statewide Academic Council (SAC) and Northwest Commission on Colleges and Universities (NWCCU). Program suspensions require notification to these bodies, not approval.

3. **Administrative Logistics:** The following are non-curricular considerations for program deletion.
   a. The provost has final approval authority for program suspensions. Once approved by the provost, the request is forwarded to the registrar to formally suspend admissions. The chancellor is notified of the action before notification goes to SAC and the NWCCU.
   b. Personnel implications will be addressed in accordance with applicable collective bargaining agreements and personnel policies and regulations. Program funds will be assigned to other department, college, or institutional priorities through established processes.

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3 Decisions to limit enrollment or admission to a program are administrative decisions that do not require completion of this approval process.

4 In addition to addressing the potential impact of a program suspension on related academic units, this coordination provides an opportunity for the academic deans and campus directors to identify areas in which the units may work together to support the program planned for suspension.
Diagram 1: UAA Degree and Certificate Suspension Approval Process

Suspension Initiated by Faculty and/or College/School Academic Dean/Campus Director

Consult With Office of Academic Affairs

College/School Dean/Director

Notification

Coordination with Affected College/School Dean/Director for Programs Offered on Multiple Campuses & Community Campus Programs

Programs Offered on One Campus

OAA/Provost Approval

Notification

Northwest Commission on Colleges and Universities

Statewide Academic Council

Chancellor

Registrar
Academic Program Deletion

Program deletions may be initiated for a number of reasons. These may include, among others, low enrollment, few graduates, or changing job markets. After a period of suspension, and in conjunction with evidence collected from within and outside the institution, a decision can be made to modify, eliminate, or supersede the existing program with one more relevant. Considerations should include the impact on students currently enrolled in the program, on directly related employment sectors, and on other related departments within the university.

Steps for Program Deletion *(see Diagram 2)*

1. **Program Suspension:** Following the process described in the Program Suspension Policy, the academic dean/campus director submits a memo to the provost requesting suspension of admissions into the program, to ensure that no new students are admitted into the program until the final determination is made. Requests for suspension should indicate the implementation date, reason for the suspension, planned duration, and identification of impacts on other UAA programs or departments. By the conclusion of the fifth year of suspension, the deletion process must be initiated.
   a. For programs offered on a community campus, the applicable academic dean or campus director (as determined by the UAA Catalog chapter in which the program is published) should be notified prior to the suspension of the program. For programs offered on multiple campuses, each applicable dean or campus director should be notified prior to suspension of the program.

2. **Consultation with Academic Affairs:** To initiate the program deletion process, consultation with OAA must occur. This consultation will include a discussion of the process and an overview of the templates required for program deletion. OAA may waive or modify this requirement where appropriate, such as a program which has been suspended for more than five years with no currently enrolled majors.
   a. The process will address the rationale for the proposed deletion, the demand for the program, the impact and implications on academic departments in UAA and other Major Academic Units (MAUs), impacts on external stakeholders, the financial status of the program, and potential options to resolve the concerns which led to the proposed deletion.
   b. If the decision is to delete the program, programs must accommodate all currently admitted students with a completion plan that meets each student’s catalog deadlines and requirements. This completion plan should outline the timeframe and priorities for resources to accommodate completion of students impacted by the proposed program deletion.
   c. Proposals to delete programs offered on multiple campuses or through collaborative arrangements between two or more academic units should be coordinated with the academic deans and campus directors of the relevant program as is appropriate to their situations.

3. **Development of Proposal to Delete or Modify Program:** This proposal should be developed using the established curriculum approval process. If the department decides to modify the existing program, or to supersede it with a new program, the curriculum is developed as a program change so that deletion of the existing program and initiation of its replacement are approved simultaneously.

4. **UA System and Accreditation Approval:** Following the internal curriculum approval process, Academic Affairs will work with program faculty to submit program deletions for approval by the Statewide Academic Council (SAC), Board of Regents, and Northwest Commission on Colleges and Universities (NWCCU).
   a. *Note:* Authority to approve deletion of Occupational Endorsement Certificates and Workforce Credentials is delegated to the chancellor, and does not require action by SAC or the Board of

3 In addition to addressing the potential impact of a program suspension on related academic units, this coordination provides an opportunity for the academic deans and campus directors to identify areas in which the units may work together to support the program planned for suspension.

6 See the Curriculum Handbook on the Governance site [http://www.uaa.alaska.edu/governance/](http://www.uaa.alaska.edu/governance/)
Regents. These program deletions should be submitted to SAC for notification purposes and to the NWCCU for final approval.

5. **Administrative Logistics**: The following are non-curricular considerations for program deletion.
   a. **Program Deletion from Banner**: When the program is deleted in Banner, students may no longer remain enrolled in the program, and the degree or certificate cannot be awarded. This administrative deletion will be postponed until there are no enrolled students in the major through graduation or expiration of admissions. Once approved by the NWCCU, the registrar will be notified to formally delete the program.
   b. **Personnel and Budget**: Personnel implications will be addressed in accordance with applicable collective bargaining agreements and personnel policies and regulations. Program funds will be assigned to other department, college, or institutional priorities through established processes.
   c. **Decisions Relative to Departments and Divisions**: This policy applies exclusively to academic programs. Decisions relative to departments and divisions will be managed within the college and institution through established processes.

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7 University Policy P10.04.020
Diagram 2: UAA Degree and Certificate Deletion Approval Process

Deletion Initiated by Faculty and/or College/School Dean/Director

Program Suspension
(See suspension approval process for greater detail)

Consult With Office of Academic Affairs

Develop Proposal Based on Relevant Considerations

Department Curriculum Committee/Chair

College/School Curriculum Committee

College/School Dean/Director

Governance Office

Undergraduate Academic Board (UAB)

Faculty Senate

Graduate Academic Board (GAB)

OAA/Provost

Chancellor

Statewide Academic Council

UA President

Board of Regents*

Northwest Commission on Colleges and Universities

Notification

Office of the Registrar

Accommodation for Existing Students

Impact on Other Departments and Colleges

Input from External Stakeholders

Considerations

Workforce Credentials

Undergraduate Programs

Graduate Programs

*Requires 60-day advance notice to have items placed on the agenda
Definitions

**Academic Program:** A specific degree, certificate, or minor approved by the Board of Regents (BOR) and/or the Northwest Commission on Colleges and Universities (NWCCU), such as a Bachelor of Arts in English. Program levels include occupational endorsement certificates, undergraduate certificates, associate degrees, baccalaureate degrees, post-baccalaureate certificates, graduate certificates, master’s degrees, and doctoral degrees.

In some cases, a portion of an academic program (such as one of two tracks) may be suspended or deleted while other portions of the program remain available.

**Program Suspension:** While decisions relative to the program are made, admissions to the program are suspended. There are a variety of reasons for suspension. These may include, among others, temporary circumstances (e.g., insufficient faculty to meet substantial enrollment increases), planned major revisions to the program (e.g., deleting a track or changing the degree level), or potential program deletion. Program suspension requires notification to the Statewide Academic Council (SAC) and NWCCU.

**Program Deletion:** Program is scheduled for deletion, a teach-out process will be developed and communicated to majors, and the program will remain in the catalog until the teach-out process is complete. When program deletion is final, the program is no longer listed as an academic program, and no students may graduate or remain enrolled in the program. Program deletion requires approval by BOR and NWCCU.

**Approval:** The relevant decision making authority grants approval for the requested program action. The action cannot proceed until this approval has been received.

**Notification:** The relevant individual or body is notified of the approved program action. The body being notified does not have decision making authority over the action.
To:          (Undergraduate or Graduate) Academic Board
From:       Faculty Initiator, Department
Date:       Re: Proposed Deletion of (Program Name and Degree or Certificate Level)

Please briefly address each of the following items. Please mark “not applicable” for any items which do not apply to the program. This cover memo should be no longer than one page.

Program Background: How long has the program been offered? If admission is currently suspended, please indicate the length of the suspension.

Justification for Program Deletion: Why is this program deletion proposed? Some examples might include enrollment trends, employment data, or shifting priorities within the department, school, or college.

Impact on Other Programs: How will the deletion affect other UA programs? Please include the GERs, programs on other campuses, and programs whose requirements include courses offered within the program proposed for deletion. How have you coordinated with those departments?

Impact on Students: How many students are currently enrolled (admitted to the program and taking classes)? How many students are currently admitted (admitted to the program but not currently taking classes)? How does the department plan to accommodate those students?

Impact on Stakeholders: Describe any input received from relevant stakeholders, such as industry advisory groups or communities served.

Plans for Program Deletion: What is the planned timeline for the deletion? Will the deleted program be replaced by a new or modified program?

This cover memo should accompany the Program Action Request (PAR) form submitted to curriculum bodies for program deletions. Catalog copy does not need to be submitted with program deletions.

This template is intended to meet the needs of the UAA curriculum bodies. Initiating faculty should contact Academic Affairs for assistance with the forms and approval processes for the Board of Regents and Northwest Commission on Colleges and Universities.

1 Please contact the Office of the Registrar (786-1560) for assistance identifying these data.